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Préface

Caraivéti – un mot utilisé dans les Védas pour signifier « la démarche de sagesse », est la revue de notre département. Nous avons nommé cette revue *Caraivéti* en espérant qu'il continuera son voyage et qu'il nous aidera à notre poursuite d'excellence.

Cela me fait grand plaisir de présenter le deuxième tome aux lecteurs. Je remercie vivement mes collègues qui ont travaillé sans cesse pour faire sortir ce tome. Les auteurs ont touché les problèmes concernant la philosophie, la pédagogie, la linguistique etc.

Nous attendons impatiemment les remarques, les commentaires de nos collègues pour que nous puissions améliorer la qualité académique de notre journal.

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TABLE DES MATIÈRES

Deogarh – A Unique Site of Composite Indian Cultural Heritage

Shanti Swaroop Sinha

Abstract: *Deogarh, situated in Lalitpur district of U.P., has been one of the most vibrant and prolific sites of Indian cultural heritage, which has yielded the material almost in continuity from Pre-historic times to 18th-19th century CE. Despite its unique importance so far Deogarh could not receive due attention of the scholars and lovers of Indian art and culture. Besides number of Jaina temples, inscriptions and enormous Jaina sculptures ranging from about 7th -8th to 18th cent. CE, Deogarh has also yielded the examples of temple architecture and sculptures of Gupta and Post-Gupta periods, Pre-historic paintings (in Rajghati, Naharghati and Siddhaghati) and tools, early medieval inscriptions and rock-cut sculptures. The temples and sculptures belonging to the Vaidik-Puranic, Jaina and Budhhist (Buddha and Buddhist Goddesses) cults, testify to the harmonious coexistence of the all three main religious-cultural streams at Deogarh. The Vaidik-Puranic icons comprise the figures of Vishnu and his mythological forms like Gajendramoksha, Nara-Narayana and Shesashayi-Vishnu carved on two Vishnu temples of Gupta (Dashavatara temple) and Post-Gupta (Varaha temple) period and Surya, Shiva, Shivalinga, Mahisamardini, Lakshmi, Ganga-Yamuna, Saptamatrika figures of subsequent period. The Jaina figures on the other hand, include Vitaragi Jinas, their Yaksha-Yakshi and Bahubali, Bharata-Muni, Jaina Acharyas, Sadhus and Sadhvis; the figures of Sarasvati, Lakshmi and Kshetrapala.]*

{**Key-words**: vitaragi, sadhana, ahimsa, aparigraha, tyaga, yaksha-yakshi, acharya, upadhyaya, tritirthi, sarasvata-sadhana , sarvatobhadra}

Deogarh (literally meaning the 'Fort of Gods'), situated in Lalitpur district of U.P., has been one of the most vibrant and prolific sites of Indian cultural heritage, which has yielded the material almost in continuity from Pre-historic times to 18th-19th century CE[i]. Despite its unique importance so far Deogarh could not receive due attention of the scholars and lovers of Indian art and culture. Besides number of Jaina temples, inscriptions and enormous Jaina sculptures ranging from about 7th -8th to 18th cent. CE, Deogarh has also yielded the examples of temple architecture and sculptures of Gupta and Post-Gupta periods, Pre-historic paintings (in Rajghati, Naharghati and Siddhaghati) and tools, early medieval inscriptions and rock-cut sculptures. The temples and sculptures belonging to the Vaidik-Puranic, Jaina and Budhhist (Buddha and Buddhist Goddesses) cults, testify to the harmonious coexistence of the all three main religious-cultural streams at Deogarh. The Vaidik-Puranic icons comprise the figures of Vishnu and his mythological forms like Gajendramoksha (**Fig. 01**), Nara-Narayana and Shesashayi-Vishnu (fig. 02) carved on two Vishnu temples of Gupta[ii] (Dashavatara temple, 6th century CE, fig. 03) and Post-Gupta (Varaha temple, 7th century CE) period and Surya, Shiva, Shivalinga, Mahisamardini, Lakshmi, Ganga-Yamuna, Saptamatrika figures of subsequent period. The Jaina figures on the other hand, include *Vitaragi* Jinas, their *Yaksha-Yakshi* and Bahubali, Bharata-Muni (fig. 10), Jaina Acharyas, Sadhus and Sadhvis; the figures of Sarasvati, Lakshmi and Kshetrapala. Deogarh has three site museums also, one close the Dashavatara temple and the other one close to the group of Jaina temples at hilltop, while third one is in the premises of Jaina Dharmashala.

Due to the lack of material facilities including transport, accommodation and adequate informations very few tourists and art-lover visit Deogarh. Virtually most of the

visitors are Jaina pilgrims. If proper attention of all the related State and Central Government agencies is received, Deogarh shall soon become one of the potential centres of the Composite Site of Indian Cultural Heritage and tourism in the country. It is a wonderful place with sylvan background and scenic beauty, where people can feel peace and relax in the ambience of rich art and cultural heritage of India.

The images of deities specially those of the Jaina Tirthankara, Bahubali and Bharat Muni make the visitors feel about Indian values of austerity (*Sadhana*), non-violence (*Ahimsa*), non-acquisition (*Aparigraha*) and renunciation (*Tyaga*). The mutuality and co-existence of Vaidik-Puranic, Buddhist and Jaina faiths reveal a state of harmony at Deogarh. Art was the visual expression of the religious thoughts, legends and Indian values and the figures of the deities are the crystallized forms of the same which is the most potent tool of self-realization and thereby self-elevation for all those who come to them with faith and devotion. Therefore, we would like to use new terms – KALA-TIRTHA (place of pilgrimage through art). This term and its definition is given by eminent scholar of Jaina Art- Prof. Maruti Nandan Pd. Tiwari for Deogarh and all other such heritage sites.

Deogarh, was singularly important prolific centre of Jaina Art- Kala-Tirtha, yielding innovatory icon types which are usully not referred to in literary works yet these are well in tune with the Jaina spirit, and are the outcome of the needs and aspirations of contemporary society. The *Tritirthi* Jina images from Deogarh showing the figures of Sarasvati and Bahubali, and the renderings of *Yaksha* and *Yakshi* with Bahubali are unique examples (**Figs. 02-03**). In some examples of Jaina *Caumukhi* two or three Jina icons are carved on two or three sides, while the remaining side/sides are occupied by figures of Jaina *Acharyas* or *Upadhyayas*. Equally interesting are the figures of Bahubali, the son of first Tirthankara Rishabhanatha, who owing to his rigorous austerity and deep renunciation was elevated to equal the Jinas, enjoying highest position in Jaina worship[iii].

Deogarh was important also because of the earliest instance of the collective rendering of all the 24 *Yakshis* is found on the façade of temple no. 12 (Shantinatha temple, 862 CE), wherein the names of *Yakshis* and their respective Jinas are inscribed to make their identification doubtless[iv]. According to Prof. Tiwari, the names of the *Yakshis* surprisingly concur with names mentioned in the eight-century Digambara text – the **Tiloyapannatti**[v] of Yativrishabh. As regards the iconography, the Yakshis reveal distinct bearing of the Jaina Mahavidyas of earlier Shvetambara tradition as enunciated in the **Caturvimshatika** (of Bappabhatti Suri, c. 8th century CE) and as represented on the Mahavira temple, Osian (c. 8th century CE, Jodhpur, Rajasthan).

The Digambara Jaina site of Deogarh developed without any direct royal patronage, although some inscriptional informations and stylistic features of images are indicative of indirect association of Pratihara, Kalachuri and Chandella rulers with Deogarh during 9th to 13th century CE. Deogarh was also an important centre of *Sarasvata-Sadhan* (centre of education and religious learning) as evidenced by the presence of profuse number of images of Sarasvati (**Fig. 04**), Jaina *Acharyas*, *Upadhyayas*, *Sadhus* and *Sadhvis* who were living together with *Shravaka-Shravikas* (lay male and female devotees) at the site for meditation, study and *Shastra-carca* (disputation). The enormous presence and dynamic activities of Jaina *Acharyas* and *Munis* must have attracted the masses, traders and all other affluent classes of Jaina community, who had contributed immensely to the art activity at the site from 7th-8th century CE[vi].

The Site Museum of Dashavatara temple and Sahu Shanti Prasad Jain Museum (in the premises of Jaina temples) preserve many valuable images. The exhibits give a brief panoramic view of the development and assimilative features of Vaidik-Pauranic and Jaina art at the site. The huge images of Rishabhanatha and Parshvanatha, mostly standing in *kayotsarga-mudra* (standing erect with both hands hanging down), distinctly reveal the emphasis of Jainism on austerity and renunciation. The images of other Jinas are also preserved in the museum. One very interesting image even in the absence of the congnizance is identifiable with 22nd Jina Neminatha (**Fig. 05**), on account of the flanking figures of Balarama and Vasudeva Krishna[vii]. According to the **Uttaradhyayana-Sutra**, **Nayadhammakahao** and **Harivamsha-Purana** (CE 783), Neminatha was the cousin brother of Balarama and Vasudeva Krishna. This kinship inspired Jainas to carve the figures of Balarama and Vasudeva Krishna with Neminatha from Kushana period at Mathura, the place of their association. In case of example of 11th century CE from Deogarh, Balarama (on right) with five hooded snake canopy holds plough, while Vasudeva Krishna (on left) wearing *kirita-mukuta* is provided with disc and mace in two hands. The figures of the *Yakshas* and *Yakshis* are also exhibited in good number. Besides their representation on the thrones of the Jina images they are also carved in the form of independent images. The museum preserves good number of independent images of Chakreshvari, Ambika and Padmavati, the *Yakshis* respectively of Rishabhanatha, Neminatha and Parshvanatha. The figures of the parents of the Jinas are also in good number. The museum also has few manuscripts and some of the later Jaina narrative paintings.

The Jaina temples of Deogarh, barring Shantinatha temple (temple no. 12), are of *nirandhara* type, which do not have the inner circumambulation. The temple mostly comprises *garbhagriha* (sanctum), *antarala* (vestibule), *mahamandapa* or *mandapa* (hall) and *ardhamandapa* (entrance porch). Apparently Deogarh Jaina temples are not of big dimension like those at Khajuraho and elsewhere. We shall now discuss in detail the architecture and iconography of Shantinatha temple, the most important of all the Jaina temples at Deogarh.

Shantinatha Temple (temple no. 12)

The Shantinatha temple (**Fig. 06**) is the largest and also one of the earliest Jaina temples at Deogarh, which is important for its architecture and iconography both. The earliest rendering of 24 *Yakshis* with their names in lable inscriptions are found on the façade of temple[viii]. It is a *sandhara* type of temple, which consists of *garbhagriha* surrounded by inner *pradakshinapatha*, *antarala*, *ardhamandapa* and long rectangular *mandapa*. The temple facing west perhaps had four entrance, which remind us of the *Sarvatobhadra* type of Jaina temples (based on the earlier concept and form of four-fold *Sarvatobhadra* Jina image), which were considered to be auspicious from all the sides.

The western entrance (main entrance) of the temple is larger than the rest. It is approached through the porch, the roof of which is supported on its front side by four pillars. If there were any steps leading up to the main door these have now sunk in the platform between the *shikhara* and the hall. The entrances on the three sides are devoid of porch and could be reached by two or three steps, which are bordered by two walls. The level of the *garbhagriha* is 70 cm. below the level of the *pradakshinapatha* and it is reached from there along a short flight of steps. The ceiling of the *garbhagriha* is flat and unadorned. In the centre of its back-wall stands the main colossal image of

Shantinatha (**Fig. 07**) having typical glaze similar to Jina image of Shantinatha temple at Khajuraho, datable to early 11th century CE. The Shantinatha image measures 517.5 cm. (including the *parikara*). On account of five inscriptions of *samvat* 919 (862 CE), 1051 (944 CE), 1493 (1436 CE), 1695 (1638 CE) and one image being undated temple can undoubtedly be identified as Jina Shantinatha. Further, there was a tradition of carving colossal images of Shantinatha in U.P. and M.P., the most exquisite examples of which are found at Chandpur, Deogarh and Khajuraho. The reason for the special veneration of gigantic idols of Shantinatha in the region could have been the contemporary need for the Peace (*Shanti*) due to the political and social conflicts and confrontations.

The ceiling of the *pradakshinapatha* is supported by crossbeam, the inner ends of which rest on corbels projecting from the outer wall of *garbhagriha*. The roof of the *pradakshinapatha* is flat. Over the sanctum with the *pradakshinapatha* is the *shikhara*. As the temple is mentioned in the pillar-inscription of *samvat* 919 (862 CE), it must have been built prior to this date. It is difficult to establish the exact chronological relationship between temple no. 12 and the pillar of 862 CE, as this type of pillar does not recur in the architecture of the temple. The inscriptions in temple range from *samvat* 919 (862 CE) to 1695 (1638 CE) in date. Hence, we feel that one has to be very careful, while assigning precise date for this particular temple and should take into account all the evidences related to architecture, sculpture, iconography and inscriptions.

The two door-frames are lavishly decorated. They do not form part of the original temple. The inner one bears an inscription stating that it was put up in *samvat* 1051 (994 CE). The two doorjambs were erected in *samvat* 1133 (1076 CE) as is evident from an inscription appearing on one of them. The present lintel, which was obviously inserted in 1076 CE, is a re-used piece of inferior quality. In *samvat* 1210 (1153 CE) two projecting niches were fixed on the left and right walls of the *garbhagriha*.

The doorway of *garbhagriha* (**Fig. 08**) is highly ornate with figural and floral decorations, which resemble depictions found on contemporary Vaidik-Pauranic temples of Khajuraho and Osian. On the doorways (11th-12 century CE), the figures are stylized and embellished. The door-lintel is divided into three horizontal panels, in the centre of which is the figure of Rishabhanatha provided with lateral strands and bull cognizance. The central position of this Jina (as *lalata-bimba*) leads one to think whether temple was originally dedicated to Rishabhanatha. But as the doorway and door-lintel are not contemporaneous, it cannot be accepted as decive evidence. The temple in actuality was dedicated to Shantinatha. Close to the central figure of Rishabhanatha on its both sides a few Jina figures in *kayotsarga-mudra* are also carved. In remaining space, the two-armed standing figures of *Navagrahas* are depicted: Surya wearing *kirita-mukuta* is holding long stalked lotuses in both the hands. The other six *grahas* from Soma to Shani, with identical features, are standing in *tribhanga*-posture with *jata-mukuta*. They holds water-vessel in left hand, while right hand is in *abhaya-mudra*. Rahu (*urdhvakaya*) is in *tarpana-mudra*. Ketu with its lower half of the body being that of the snake is in *namaskar-mudra*.

The left extremity of door-lintel exhibits for-armed figures of Lakshmi with lotuses along with figures of Cakreshvari *Yakshi* (above) provided with Garuda-*vahana* and discs in hands. The corresponding right end of door-lintel is occupied by four-armed figure of Sarasvati holding *pustaka* and *vina*. Ambika, the *Yakshi* of 22nd Jina

4

Neminatha, holding *amralumbi* (bunch of mangoes) and child is present above the figure of Sarasvati. Thus, the presence of Lakshmi and Sarasvati, goddesses of wealth and wisdom with the two most venerated *Yakshis* – Cakreshvari and Ambika on the entrance door-lintel makes the rendering more meaningful.

The upper panel of the door-lintel contains the figures of 24 Jinas both in standing and seated postures. Further above on the door-lintel are carved (in a row) 16 auspicious dreams (*mangala svapna*) seen by the mothers of each of the 24 Jinas on the might of their conception (*garbhadharana*). As usual, the dreams include bull, elephant, horse, Shri (or Gaja-Lakshmi) and other subjects as prescribed in the Digambara Jaina texts, namely **Tiloyapannatti**, **Harivamsha-Purana** and **Adi-Purana**[ix]. On the lower doorjambs are carved the beautiful figures of Ganga and Yamuna on their respective *vahanas-makara* and *kurma*. The rendering of Ganga and Yamuna on lower doorjambs was the common feature of Vaidik-Puranic and Jaina temples at Deogarh and Khajuraho and other places. The figures of Ganga and Yamuna respectively symbolize purity and devotion, which are pre-requisites for entering the sanctum for worship. On both the doorjambs are carved the creepers along with the figures of leogryphs (*shardula*), snakes and couples engrossed in different activities, including playing on musical instruments. The figures of Upadhyayas holding books also appear. These figures reveal wonderful fusion of worldly, spiritual and divine aspects.

At a date unknown to us, the roof of the *pradakshinapatha* was provided with a crenellated parapet. This marks the end of the construction of the temple. Later on, the *shikhara* underwent several repairs. The presence of protecting wall in the *garbhagriha* explains why the main idol of Shantinatha, flanked by two Ambika *Yakshi* figures, has come down to us intact.

The connecting platform (superimposed on the original floor of the porch) links the outer doorsill (which is old) and plinths of the four porch-pillars, which are partially sunk in it. It is not possible to say whether the connecting platform is later, earlier or contemporary as the two shrines are embedded in it. The area of the connecting platform is carved by three intermediate roofs. It is difficult to decide wheter these were built before or after the discovery of the temples. The link of the roof of the *pradakshinapatha* with that of the hall is also clear. Square, flat roofed-hall has 36 pillars, which adjoins the porch of temple no. 12 on its west side.

On the account of the above, we can conclude that the construction of Shantinatha temple started in early 9th century CE and its façade and 24 *yakshi* figures thereon belong to that period. But the *shikara*, the *sandhara* type, present sanctum and entrance doorways and their decoration and sculptures were constructed/carved in 10th-11th century CE. The rectangular *mandapa* and foremost porch subsequent in date belong to the period from 11th to 13th century CE. Thus, the entire temple complex of Shantinatha temple may be dated to a time bracket from 9th to 13th century CE.

Although the Jaina temples at Deogarh present interesting architectural aspects, the images are far more important for different reasons such as their forms and iconographic variety therein and several innovatory icon types, some of which are not fond anywhere else and even in the Jaina texts. The site virtually is the treasure house of early medieval and medieval Jaina sculptures. The Jaina sculptures of Deogarh are of great significance because they present a vast amount of research material and artistic quality. In fact, several images of Deogarh should be counted among the best

examples of Indian sculpture. The beauty of the marvelous Jina figure (*mulanayaka*) from temple nos. 12 and 15 (**Fig. 09**) are serene in expression and equal to that of the world famous Buddha image of Sarnath in *Dharmacakraoravartana-mudra* and which is comes in the spirit of the textual references of **Brihatsamhita** and **Manasara**, which conceive Jina images as *rupavana*, *manohara* and *surupa* (beautiful)[x].

The size of the building varies from the high temple (no. 12) to the smaller ones. Only temple nos. 12 (9th -13th century CE) and 28 (10th-11th century CE) represent different type of buildings, showing architectural embellishments. The small but beautiful temple no. 15 (7th -8th century CE) contain one big Jina image on each of its three inner walls and appear to be subsequent replica of 6th century Dashavatara temple of Deogarh itself[xi]. The remaining temples are quite plain barring their doorframes and subsequently added pavilions. There are only two temples (nos. 12 and 28), which conform to the normal features of the *nagara* style of north Indian temples.

The large number of Jaina images and lack of stylistic conformity therein present problems, which are otherwise not met with in Indian art. However, we are reminded of the Chalukyan temple site at Ahole. This was due to the fact that Jaina art activity at Deogarh thrived without any direct royal patronage. Rather it was fostered by the Jaina *Muni-Samgha*, common men and small business groups as we find in case of Kumbhariya Jaina temples of Gujarat. Deogarh was perhaps the workshop and supply centre of Jaina images to the neighboring centers of Jaina art.

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List of Illustrations:-

Dashavatara temple, Deogarh (Lalitpur, U.P.), c. 600 CE.

Tritirthi image showing two Jinas (Sambhavanatha and Ajitanatha) and Sarasvati, temple no. 02, Deogarh, 12th

Neminatha (joined by figures of Balarama and Vasudeva Krishna), Sahu Shanti Prasad Jaina Museum, Deogarh, 10th cent. CE.

Bahubali in Tritirthi image with two Jinas, temple no. 02, Deogarh, 11th cent. CE.

Sarasvati, temple no. 19, Deogarh, 11th cent. CE.

Shantinatha (16 feet), sanctum, Shantinatha temple, Deogarh, 10th cent. CE.

Shantinatha temple (temple no. 12), Deogarh, 862 CE.

Doorway, garbhagriha, Shantinatha temple, Deogarh, 11th-12th century CE.

Jina image, garbhagriha, temple no.15, Deogarh, 8th cent. CE.

The Practice of Natural Dyeing - A Study from Academic Perspective on Heritage, Sustainability, Upliftment of Artisans and Craftmen

Esha Mukherjee

Abstract

This paper is an attempt to investigate the practice of natural dyeing from academic perspective. It aims to bring findings regarding the involvement of artisans and craftsmen in this practice and their sustainability and upliftment through this, and how the heritage of natural dyeing is being carried by different professionals. The major parts of this paper are the heritage of Santiniketan batik using natural dyes, the practice of natural dyeing in an academic environment, the role of academicians and different individuals associated with natural dyeing and the new age practice of natural dyeing in Santiniketan.

Natural dyeing is a sustainable and eco-friendly practice. Although technology has made a huge impact on our lives the importance of such craft has always remained significant for its natural resources and the skill, involvement of artisans and craftsmen.

Batik is a hand-painted resist dyeing art, where natural dyeing is majorly used to bring a distinct look to the whole fabric. The art of batik was first introduced in Santiniketan by Rabindranath Tagore and his daughter-in-law Pratima Devi and later vividly explored by Smt. Gauri Bhanga, daughter of eminent artist Mr. Nandalal Bose. These great masters not only helped the local artisans to sustain their lives through this craft but also made it a part of the world art and craft scenario.

Academics have played a significant role in reviving the sustainable practice of natural dyeing and have given access to the students to learn about the tradition of natural dyeing by including it in the course curriculum. They have engaged different artists, artisans, craftsmen in different academic workshops and seminars. Academicians and different individuals are continuously exploring the medium and making an impact in modern Indian textile.

Few textile artists and designers have started working with natural dyeing in Santiniketan. The availability of various dyestuffs, beautiful natural ambiance and other economic and environmental factors have given them the comfort to work here.

This paper aims to study the evolution of this indigenous practice for social needs and how natural dyeing has become a lifestyle practice, the need for such practice in this trying time where the world is facing a huge economic crisis due to corona virus and such economical eco-friendly practice actually can help the artisans and craftsmen to sustain through this. It focuses on the significance of using natural resources, doing eco-friendly practices, and the huge contribution of artists, academicians, artisans and craftsmen to carry the legacy of natural dyeing and to spread the knowledge about social economic cultural importance of this practice among the youth.

Keywords- natural dyeing, academic, sustainability, heritage, artisans, craftsmen, batik, Santiniketan

Introduction

India has been very famous for its diverse range of handicrafts and textiles for a very long, which has been mentioned in different written literature. To bring Indian textile to the pinnacle the contribution of Indian artisans and craftsmen are remarkable. From generations to generations they have evolved forms, explored natural resources and developed their craft to cater cultural strength with sincerity, vigorous labour and skill. Such practices have become integral parts of their lives and they have found this as a way to sustain themselves.

Natural dyeing is the process of dyeing cloth or yarn by using natural elements such as leaves, flowers, fruits, roots etc. and those who make these colours are called dyers or *ranjak*. In remote and rural India, indigenous dyeing method were cultural practices and caste divided society dyeing was assigned profession. After weaving, the weavers send the cloth to the dyers. Dyers add a distinct look to the fabrics with their sense of art, skill, experience and hard work. With coming of synthetic dyes, which are fast dyeing method and wide palette availability, the demand of natural dyes declined over time. Gradually with call of sustainable eco-friendly textiles natural dyeing revival wave has been recognised. The traditional dyers, many individuals, artists and academicians are exploring this medium with different knowledge and experience.

Natural dyeing is one of the major sustainable practices and it has a great heritage that is connected to our social, economic, cultural and environmental lives. This practice has been protected and sustained by skillful hardworking artisans and craftsmen who have made it necessity and purposeful. In this paper I will bring forth the sustainable practice of natural dyeing from different perspectives, involvement of artisans and craftsmen, their sustainability and upliftment through this, and how the heritage of natural dyeing is being protected in contemporary scenario. The heritage of Santiniketan *batik* using natural dyes, the role of art academics in the practice of natural dyeing and their associations with artists, artisans and craftsmen, work process of different individuals associated with natural dyeing and the new age practice of natural dyeing in Santiniketan are the major parts of discussion for this paper.

Literature Review

The book "Batik & tie dye: The art of the resist dye" provides data on origin and tradition of *batik* in India and Indonesia, the traditional techniques of *batik*, conventional instruments, the designing and details of resist method, different dyeing methods and materials. (Bhagat, N. 1996)

Methodology

Research for this paper is carried out by documentation and experimental research methods.

Firstly, it involved reviewing literature, visiting museums.

Secondly, it had field study, documentation, recording interviews, attending workshops and seminars.

Lastly, it involved debate and discussion with interdisciplinary scholars from different fields.

Findings and Conclusion

Batik is a method of creating patterns and designs on the fabric surface using wax resist dye technique. It is one of those textile mediums where natural dye is used to bring a distinct look to the whole fabric. The process of making *batik* is very engaging and it reflects one's vision and creation. The origin of the word '*batik*' is derived from the Javanese word '*ambatik*' meaning a cloth studded with little dots. This is a very old resist technique with highly artistic skill in Indonesia and the island of Java.[1] At Santiniketan it was revived and got new dimension by Gurudev Rabindranath Tagore. He was impressed by the art of batik in Java during his trip in 1927, he wrote about it in his letter to Pratima Devi, his daughter-in-law. He observed the use of batik fabric in Javanese dance and dance dramas by performers. Not only this but also he noticed that such decorated batik cloths also have been used for stage decoration.[2] Later with initiative of Pratima Devi and French painter Andree Karpeles the practice of batik was developed as *tuli batik* in Santiniketan and the design done with *tuli batik* became a part of costumes of dancers in Rabindranath's dance dramas. On this trip Tagore was gifted a batik cloth by the king and was informed the exclusiveness of this Javanese batik. Surendranath Kar, a renowned artist and architect also went to Indonesia with him and learned the technique of batik done by copper tool known as 'canting'. They started practicing batik in Santiniketan. One of the pioneers of exploring batik design was Nandalal Bose, a renowned artist and then teacher of Kala Bhavana. His vision and understanding of art inspired his students a lot.[3] Later the prominent artists who enriched vocabulary of batik design were Gauri Bhanja, Jamuna Sen, Khoma Ghosh, Ila Ghosh, Arundhuti Thakur, Haimanti Chakravaty, Rani Chanda, Indulekha Ghosh, Bani Bose. Gauri Bhanga, daughter of Nandalal Bose worked immensely on *batik* in her student life and later in her teaching days. She was one of those few artists who experimented with batik by using traditional methods with ornamental designs. Instead of copying the geometric designs in Java *batik* she developed alpona motifs, and this style emerged as a new style, mainly known as Santiniketan batik. Few motifs like joba (hibiscus), mayur (peacock), jhalor (geometrical tassels), padma(lotus flower), sankha (conch), fish are very common in Santiniketan batik. She used to avoid using acid dyes and emphasis her students being loyal to mother-nature by teaching them the usage of fruits like myrobalan to get khaki tone, catechu to get copperish tone.[4] Not only her, but many artists at that time preferred natural dye for its sober and sophisticated shades of colour and it was easily available in the surroundings. Myrobalan, catechu, turmeric, indigo, hibiscus, Indian madder, tea leaves were the major dyestuffs used for this.

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Batik became a part of academic course curriculum in Kala Bhavana and later technical and skill development study of Shilpa-Bhavana (now known as Shilpa-Sadana) created rage of *batik* from fabric to leather. The craft of this resists dye technique was adopted from Santiniketan and later spread to different parts of India.

Dr. Abdul Majeed, notable alumni of Kala Bhavana, made a big name for himself in the world of *batik* and art scene. He taught many unprivileged women the craft of *batik* and gave them the opportunity to sustain their lives by becoming financially independent. Dr. Majeed published several articles on *batik,* notably *Master of Batik Craft* in the Daily Telegraph (1977); *Batik Revolution* in the US (1998 and 2002), besides many books and research papers. He received many honours in his life including Batik painting award in Bombay and Udaipur. His works are displayed in public and private collections in India and abroad. The founder of the Batik Art Research and Training Institute, he organised exhibitions all over the world and well-known for his original *batik* paintings. He provided teaching and research guidance on *batik* art.[1] His wife Mrs. Rashida and his daughter Ms. Sabiha are also renowned *batik* artists.

These days many ex-students of Kala Bhavana and Shilpa-Sadana continue to practice this in their native areas. They are teaching it successfully to several renowned art academics. Few of them have started practicing *batik* with natural colour and they are experimenting with different techniques, motifs and colour implications. They make products like saree, dupatta, scarf, bag with *batik* designs. These products have huge demand in India and abroad. Not only them but the craft of *batik* is also practiced by the women of tribal villages near Santiniketan. Some of them work for local cottage industries also. It helps them to earn a little on their own and to contribute to the families. The practice of *batik* helps many to sustain their lives and it has made a huge impact on the socio-economic life of Santiniketan.

At Santiniketan *batik* has always been an integral part of several festivals. Among all the products made by using batik technique '*uttariyo*', a piece of cotton or silk cloth done with batik, folded in a specific manner and hung from the shoulder, has played a significant role in the cultural life of Santiniketan. A *batik* uttariyo is given to honour eminent personalities in university programmes and several ashram festivals. Apart from this batik work is a great attraction in Nandanmela, an art fair organised by Kala Bhavana and Poushmela, a winter fair celebrated every year in Santiniketan.

On the occasion of Gauri Bhanja Birth Centenary in 2008 Kala Bhavana organised an exhibition to display her major *batik* designs on fabric. Recently in 2018 on the occasion of celebrating glorious hundred years of Kala Bhavana, fifteen *batik uttariyo* were prepared by the present and ex-students of Kala Bhavana to give honour to the invited eminent personalities. All these were done with *tuli batik* (brush batik) and natural dye under the guidance of Mr. Krishnendu Bag, retired faculty member and natural dye artist in Santiniketan. Mr. Krishnendu Bag and Mr. Sakshi Gopal Das are the prominent academic trained *batik* artists experimenting with traditional batik techniques on the campus of Santiniketan.

Students show their keen interest to learn traditional technique of *batik*. The academic practice of *batik* design in Kala Bhavana and Shilpa Sadana, and in the local cottage

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[1] http://www.worldbatikcouncil.com/council/members/abdulmajeed.htm

industries help them to understand the evolution of natural motifs and colour application and how *batik* designs have been explored by different artists, academicians and artisans. They make various designs according to their understanding of art and contemporary vision. The motifs inspired by natural objects and sober colours from natural dye used in *batik* technique in Santiniketan make it very unique from other crafts.

The invention of synthetic dyes in the mid-19th century and industrial revolution overlooked cottage industries of natural dye. Synthetic dyes brought shades of colours but also some health hazards which bring buyers back to eco-friendly natural dye. The traditional dyers, individuals were recognized and invited in academic and cultural institutions. The pure shades, brilliancy and variety of colours achieved from natural dye became visual expression for artists and other practitioners. The role of academics became very significant in reviving the practice of natural dye as many academics have included it as course curriculum. Students from different regions learn about the heritage of Indian textile in their academic courses. They get to learn the techniques under the proper guidance of teaching experts. The great collection of books in library, the studio space, open environments help them to learn and understand such practice more deeply. Students get benefits from the workshop conducted by the academics where they get introduced to renowned traditional artisans and their works, the legacy that is carried out by them through many generations. It makes a sense of understanding among the students about the traditional practice.

In Kala Bhavana and Shilpa Sadana of Visva Bharati University in Santiniketan natural dye is taught aesthetically and technically. In Kala Bhavana faculties prefer students to understand aesthetical aspects to depict the pictorial elements, colour application, design making through natural dye. In Shilpa Sadana faculties are inclined for skill and technical guidance, the method is prior emphasis on the techniques of natural dye. Mr. Krishnendu Bag, Mr. Sankar Roy Maulik, Mrs. Padmini Balaram are the practicing faculties who are teaching natural dyeing to the students for long time.

Mr. Krishnendu Bag is a former Assistant Professor, Dept. of Design, Kala Bhavana, Visva Bharati, Santiniketan. He is a natural dye artist and an academician. Trained in technical and academic guidance from Kala Bhavana, Visva Bharati, Santiniketan he was introduced to natural dye by his teacher Mr.Pranab Roy. Later he developed his interest in this and mastered different techniques of natural dye. He has taught many of his students to work with this medium. During the discussions with him about his art practice, he shared his experience that how his academic learning in Kala Bhavana has helped him to understand the artistic practice and developed the idea of design in textile. Nature has always been his inspiration for artworks. He always breaks the conventional form of natural elements and creates a new dimension in his work. His art is not only a tribute to mother-nature but it expresses his deep and sensitive interpretation of nature. He mainly works with *batik, kalamkari, shibori*, and weaving medium. The cloth and yarn used for these artworks are dyed in natural colours by him. The fine spontaneous lines, application of dots and different textures, rhythmic patterns, natural and abstract forms and sober colours achieved from natural dye make his work unique and it resonates deeply with the viewer. Both of his functional and expressional works in textile reflect his great technical skills and aesthetic sense of design and colour. According to him this practice can only sustain when more people will be involved in this and find interest to practice this.

Dr. Sankar Roy Maulik, assistant professor of Silpa Sadana, Visva Bharati University, Sriniketan, is continuously exploring the medium of natural dye along with writing various articles and research paper on the same in various national and international journals. Coming from science background he mainly focuses on the technical aspects of natural dyeing and experiments this technique with different fibres. His notable published papers as both author and co-author are 'Application of Natural Dyes on Protein Fibres Following Pad-Steam Methods'; 'Batik on handloom cotton fabric with natural dye'; 'Acacia auriculiformis-A natural dye used for simultaneous coloration and functional finishing on textiles'; 'Painting on handloom cotton fabric with colorants extracted from natural sources'; 'Dyeing of Eri silk with natural dyes in presence of natural mordants'; 'Dyeing of wool and silk with Bixa Orellana'. He guides students in their research projects and has been associated with various research programmes.

Dr. Padmini Balaram, professor of Silpa Sadana, Visva Bharati University, Sriniketan, has carried out several academic and professional research projects in the field of natural dye in India, China, South Korea and Japan. She majorly works on indigo dyeing and uses different techniques such as *shibori,* tie and dye, clamp dye and few of her own methods to execute her artworks. Her works have been displayed in different exhibitions. Mrs. Balaram is continuously giving her effort to create awareness about the natural indigo dyeing process in India.

The faculties of Visva Bharati invite artists and both contemporary and individual artisans for workshops, seminars and other intellectual sessions. In February 2019 eminent natural dye artist Mr. Ajit Kumar Das was invited to teach natural dyeing. Mr. Das, who currently lives and work in Birati, Kolkata, West Bengal is an artist who has been committed to the practice of working with natural dyeing and produces sensitive works which make connect the viewers with his works. He belongs to a family whose profession was washing clothes and dyeing clothes with natural colours. His father used to dye cloth with annatto seed. This made a keen interest in him to carry the legacy of natural dyeing. Though he was never trained officially but his proper training of block printing and dyeing was started when he was appointed in the Weavers Service Centre in the technical post. Being a technical expert he got privilege to learn and work on natural dyeing both with communities and artists. He met artists, educators like K.G. Subramanya, Tansukh Mahicha, Riten Mozumder, during various programmes organised by Weavers Service Centre and got opportunities to learn from them. His interest was increased in natural dye then. He not only learned natural dyeing but also developed a great sense of art and aesthetic in his works. Experience and influence of his job has enriched in present vocabulary that his works are exhibited and curated in abroad and within country. He has great technical skill and great sense of observation. He is continuously exploring this medium with different techniques and visual depictions. He is very much inspired by his immediate surroundings along with Indian mythology and Tantra art. Apart from that we see large scale of animal compositions, nature study, and abstract form in his works. Myrobalan, catechu, madder, indigo are major dyestuffs used for his works. After being retired from weavers' service centre he runs a self-motivated unit where he teaches natural dyeing, organises workshops. During the conversation with him he expressed that such art practice is now facing difficulties due to lack of patronage. Earlier it only survived because of the patronage and encouragement by the royal authorities. It is the reason that many dyers from dyer community have left this practice and have found other

professions. According to him there is a huge possibility for this practice because of its huge demand in India and abroad and if the government takes initiative and artisan get their proper due and acknowledgment then this can bring a change in the present situation and this can sustain for long and through this many artisans and craftsmen can sustain their lives too.

Renowned artisan Mr. Khalid Mohommad Khatri came to Kala Bhavana In February 2015 to teach *ajrakh* print, an ancient block-printing method on textiles with natural colour. He taught the students traditional *ajrakh* printing technique with colour application through natural dyeing. He also displayed few *ajrakh* printed fabrics along with traditional tools. In the interactive sessions with the students he demonstrated that *ajrakh* originated in the present provinces of Sindh in Pakistan and the Indian districts of Kutch in Gujrat and Barmer in Rajasthan and later became a significant part of Indian textile. Traditional *ajrakh* involves various stages of dyeing and resist printing. Wooden blocks, carved with intricate designs are used in this technique to create beautiful pattern on the cloth. Earlier specialist wood carvers used to make these blocks for the artisans but now many artisans have learned the technique and make the blocks themselves. He explained that the traditional motifs are inspired by natural elements. Stars, sun, leaves, flowers are the widely used motifs in *ajrakh* printing designs. The motifs are built around a central point and repeated in a grid-like manner in all over the fabric, the horizontal, vertical and diagonal lines make rhythmic and symmetric pattern which makes it more attractive. The use of natural dye has been constant for *ajrakh* print and traditional colours used in it are very symbolic to nature, where crimson red represents earth, blue represents dusk; black and white are used to outline motifs. The colour red is achieved by Indian madder and blue comes from natural indigo. Black colour comes from iron dust, molasses and millet flour. Tamarind seeds are also added in this to thicken the dye. This craft is being practiced by many generations in his family.

Mr. Dulal Mete, a veteran artisan, has been associated with different cultural institutions to teach different techniques of natural dyeing. He is a former employee of Amar Kutir Society of Rural Development in Santiniketan. He joined Amar Kutir Society as a dyer in 1990 and retired in December 2020. He started natural dyeing there in 1995 and since then he has developed different techniques of natural dye. After his Retirement, he has opened a small unit for natural dyeing at his home. He mainly works with the medium of *shibori*, block printing, hand painting using natural colour on silk, tussar and cotton fabric. All dyes are collected by him, not purchased. Sometimes it takes long time but he finds the process of collecting materials by himself very engaging and joyful. Myrobalan, bark of arjun tree, eucalyptus tree, marigold petals, rose petals are the major dyestuffs he uses for his works. Throughout his service life he has been associated with many workshops both as trainer and participant in different academics to explore natural dyeing and in his words through these associations he also has learned a lot and improved his works.

Dipak Kumar Ruidas and Prodip Polley, alumni of Visva Bharati University are the independent budding natural dye designers from Santiniketan. Their works are largely done in organic fibres with natural dyeing. Many villagers have learned natural dyeing from them and now work for them. Their primary productions are female wearable-saree, dupatta, dresses etc. The nature and the surroundings, the availability of

dyestuffs and involvement of local artisans and tourism of Santiniketan have played vital roles to run their business from here.

Dipak Kumar Ruidas is an entrepreneur who started the brand Taranga Santiniketan. It's the handicraft store cum workshop place. In initial one year he worked with different textile mediums but his love for organic colours forced him to start natural dyeing. Since 2012 it's the major part of his practice. He has participated in many natural dye workshops in various places of India and collaborated with many renowned organisations such as Aranya natural, Sutra etc. He organises natural dyeing workshops every year for students and individuals in Taranga. Not only the Indians but the foreigners also show their interests in natural dyeing and participate here. Nature has been a constant inspiration for his works. . He mainly uses locally available materials which are economical too, such as myrobalan, catechu, madder, tea leaves. Different kinds of sarees, dupattas, base cloths done with jamdani, shibori, kantha are available in his store. The motifs, forms in his works reflect the rural life of West Bengal. Every single yarn he uses for his works are dyed with natural colours. Many local craftsmen and artisans from nearby villages, many weavers from Nadia district of West Bengal work for him. His works are appreciated by his client for their soberness, fineness and well execution.

Prodip Polley, founder of Karma Ashrama, mainly works with organic fabric and natural dye. Natural dyed hand-woven, *shibori, batik*, block printed, eco-printed dupatta, dresses, bags and other handcrafted products are available in his store. An alumnus of NIFT Kolkata and Shilpa Sadana ,Visva Bharati University, he learned the basics of natural dyeing from his institutions. During his master degree project, he worked on the recycling process of a waste land. This project inspired him to start cultivating indigo in organic way in his village. He belongs to a farmer family and his parents are also involved in this indigo cultivation. He is continuously giving effort to dismiss the misconception that indigo cultivation ruins the land and raising awareness of natural dyeing. Presently he is cultivating annatto seeds along with natural indigo. He mainly focuses on surface ornamentation. The motifs used in his works are mainly inspired by natural elements like flower, fish, birds, butterfly, leaf etc. and objects found in surroundings like different vehicles. He has taught the technique of natural dyeing to over five thousand people including students and individuals and many of them have started their new ventures through this. Around fifty artisans, craftsmen from Santiniketan and Kolkata work for him. Majority of his craftsmen are women from nearby villages. Presently he has collaborated with some organisations and is showcasing his works in different platforms.

From artists' and craftsmen's' practices on natural dye it is evident that consumers are becoming attentive and concern about method and maker. In the present time it is one of those few practices through which many people can sustain their lives and through their participation in this craft the heritage of natural dyeing will be protected too. Covid-19 has made a huge turmoil in our economy. This eco-friendly practice helps many artisan, craftsmen to survive by earning from this.

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List of figures

Figures

1. Batik saree by artist Nanigopal Ghosh (image courtesy- Swati Ghosh)

2. Batik uttariyo

3. Mr. Krishnendu Bag is showing the process of 'batik' wash

4. Krishnendu Bag's work on batik with natural dye, title- Shapes of insecurity (image courtesy- Krishnendu Bag)

5.   Ajit Das at workshop in Kala Bhavana, Santiniketan

6.   Khalid Mohammad Khatri at workshop in Kala Bhavana, Santiniketan (image courtesy- Ujjwal Dey)

7.   In conversation with Mr. Dulal Mete

8. Dipak Kumar Ruidas at workshop in his studio (image courtesy- Dipak Kumar Ruidas)

9. Prodip Polley is showing his indigo dyed 'shibori' work

A Brief Study of Painting Based on Guru Granth Sahib With Reference to Ragmala, Barah-Masa and Shalokas

Sukhandeep Kaur & Ram Viranjan

ABSTRACT

Every delicate art requires a pleasant environment to flourish. Like, Art plays a vital role in Hinduism, Buddhism, Islamic and Christianity, and many other religions worldwide; similarly, art profoundly affects Sikh history. Art has shed its light on all events, ideals, and teachings related to Sikhism. Every Art of Punjab embodies delicacy and potency. A considerable number of artists have painted aspects of Sikhism and its beliefs. Their arts' subject matter was mainly related to the Sikh guru's portraiture, martyrs scene, battle scenes, etc., but there is another aspect to it in which it has already found its whole spotlight on the paintings of Adi guru Granth based on the ragas, Barahmas, and hymns. Some of the artists were so impressed with the hymns recorded in Guru Granth that they embodied all the vital components in colors. The purpose of this research paper will be to give an overview of some of the paintings done on Adi Granth, the sacred book of Sikhism in the context of Ragamala, Barhamaha, Gurbani verses that contain

Shalokas Swayyas.

Keywords: Art, Sikhism, Adi Granth, painting, raga and ragmalas, hymns, Punjab, etc.,

Introduction

Sikhism traces its beginning to Guru Nanak, born in 1469 and died in 1538 or 1539 (Mcleod, 2009, p. 19). After him, the process was ably carried forward by his nine successors, and gradually the Sikhs came to have a network of institutions that proved useful more than in one way (Gill, Adi Granth Paintings- Raga -Ragmala & Barah-Maha, 2002). The Sikh holy book, the Granth sahib, initially assembled by guru Arjan Dav, includes the composition of seven of the ten Sikh gurus and those of other saint scholars (Brown, 1999, p. 17). At the death of the tenth and last Guru, Gobind Singh, it came to be regarded, as already noted, as the permanent habitation of the eternal Guru and is accordingly known as the Guru Granth Sahib (Mcleod, 2009).The supreme court of India recognizes it as a juristic person; the only sacred scripture anywhere granted this status (Mcleod, 2009). It is also pertinent to give a brief overview of the enrichment of Sikh art in spreading its beliefs, ideas, and teachings of Sikh divine masters.

Although Sikhism has emerged worldwide, it has a remarkable affinity with this region because it has appeared in Punjab. Before the rise of Sikh power, there is no activity as far as painting in Punjab is concerned (Aryan, 1975, p. 13). For ages, the land of Punjab has been a hotbed of foreign invasion. The history of Punjab during the terrible fifty years of second half of the 18th century is a story of continuous war and bloodshed (Kang, 1985, p. 2). Due to these specific reasons, the exploration of art in Punjab was quite turbulent. At the very end of the 18th century, Ranjit Singh appeared on the scene and found in his land a weakening confederacy that was prey to the faction of its chiefs (Kang, 1985, p. 2) He established a solid and well-organized kingdom with his responsible strength and keen intelligence for himself and art also prospered throughout his tenure. Carrying on the Mughal school and Rajput school

traditions, painters of different sects created masterpieces of murals and miniatures. Before the advent of Muslims, Punjabi painters, inspired by the practice of Kangra, Basholi, and Rajsthan artisans, proceeded to paint in their style. But after the establishment of the Mughal rule, they could not help but be impressed by the subtlety of their art works. By the time of Maharaja Ranjit Singh, Punjabi painting was a fusion of different local and foreign painting styles. He provided tremendous encouragement to artists and poets. He laid the foundation of the Sikh school of Art in Lahore to expand painting in Punjab, which later became the center of art and literature activities.In addition to the miniature paintings, large murals also came continuation with the subject matter of religious anecdotes and historical events. The primary example of these paintings is the mural of Baba Atal in Amritsar depicting the Janam Sakhis. The amount of images created by the fresco method is entirely satisfactory. Moreover, Baramasi Paintings and murals in the time of Maharaja Amar Singh Patiala can still be seen in Qila Mubarak. The Patiala School of Painting, founded by Maharaja Narinder Singh, was also considered the golden period of painting in Punjab. These paintings' content was mainly related to wrestling scenes, warriors fighting with swords, hunters, deers, peacocks, lions, elephants, and vine shrubs. It is also necessary to mention a great personality who carried forward the Sikh School of Art tradition. His name is Bhai Gyan Singh Naqash, who served as a painter at the Golden Temple of Amritsar for 30-32 years. He proved to be an art master by painting beautifully on the walls of the Golden temple. Another artist named Abdul Rehman Chugtayi, contemporary to Gyan Singh Naqash, whose art creations are based on the poetry of the ghazal poet Mirza Ghalib makes acceptance in the art world. Artist Thakur Singh was to follow in the footsteps of Western painters. He made Shrines, temples, and gurudwaras the subject of his paintings, as he composed stunning images of the Golden Temple. Artist Sobha Singh comes up with the idea of a person walking in the spiritual circle comes to light. Just as the ancient painters of Europe embodied the spiritual figures of Jesus and Mary in their devotion and art, so Sobha Singh gained the popularity of the people by painting Sikh Gurus. It was with the 1937 "*Naam khumari Nanaka",* of which thousands of prints sold, that Sobha singh embarked on a search for a perceptible form of the Guru which would become fixed in the minds of the Sikhs as the permanent and authentic images of the Guru (Kessar, 2003).This world-famous creation, has wholly taken root in the people's hearts. Despite it, G.S Sohan Singh has also created art on Punjab's religious, social, and historical themes. He has also made the verses and Ragas of Gurbani the basis of his paintings. Painter Kirpal Singh has narrated Sikh history through colors instead of words and has revived Sikh history full of sacrifices with the spirit of 'Bir rasa' effectively expressed in wars. Like all these artists, countless other names have made an invaluable contribution to Sikh painting. Some of them were very touched by the journey of these achievements in Sikh history, and they wanted to work on another feature associated with Guru Granth Sahib. Among these working on this subject are Dr. Ranjit Singh Gill, Jaswant Singh, Davinder Singh, Sidharth are the most leading artists who produced paintings on Gurbani Verses. Qualitative research will be implied to write the paper which is based on secondary sources.

Adi Granth Composition

Art has performed an estimable contribution to the propagation of every religion. Every religion aims to illuminate the path of humanity with the message of its ideals and guide to live a peaceful life. All religions have a profound affinity with art, whether Sikhism, Hinduism, Islamic, or Christianity. If one aspires to recognize the relationship between art and theology, it can also be seen through their sacred books. Like other religions, there is a holy book of Sikhism, Sri Guru Granth Sahib. Adi Granth covers 1430 pages. The formation in the Adi Granth is essentially all ordered according to 31 ragas, a musical mode. A hymn word in guru Granth sahib described a Shabad, or 'bani,' produces a mystical union between a man and God. The Punjabi language has been applied to record the Guru Granth Sahib.Because this lettering and vowel signs were used by gurus, it came to be known as '*gurmukhi*' that is, 'from the mouth of the Guru' (Singh G. , 1998, p. 24) (Singh G. , 1998, p. 24).The volume contains, 5,751 shabads-4829 composed by the first five gurus, 789 by *bhaktas* (devotees) and other holy men (Singh G. , 1998, p. 32).

Classification Of Paintings Based On Guru Granth Sahib

The scripture is systematized in sub-divisions according to 31 ragas except for pages 113(daily prayers),1353-1429(*shalokas*&*swayyas*), and 1429-1430that include Ragmala (Gill, Adi Granth Paintings, 2002).Most paintings are concerning raga and ragmalas, barahamah and shlokas written in Guru Granth sahib. The 31 Ragas are respectively: Sri Raag, Raag Majh, Raag Gauri, Asa Raag, Raag Gujri, Raag Dev Gandhari, Raag Bihagra, Raag Vadhans, Raag Sorath,

Raag Dhanasri, Raag Jaitsri, Raag Todi, Raag Bairari, Raag Tilang, Raag Suhi, Raag Bilawal, Raag Gound, Raag Ramkali, Raag Nata- Narayana, Raag Mali Gaura, Raag Maru, Raag Tukhari, Raag Kedara, Raag Bhairo, Raag Basant, Raag Sarang, Raag Malar, Raag Kanra, Raag Kalyan, Raag Parbhati, Raag Jaijaiwanti. Some of the prominent representations made on these ragas have come to light.

Ragmala Paintings

Before addressing Ragamala paintings, it will be appropriate to determine the historical period related to the background of Ragas and literature. Discovery in the Indus civilization reveals that music existed somewhere. For instance, the dance sculpture of the pre-historic period suggests an awareness in ragas as abounding. Postures invariability imbibes a certain rhythm of ragas in sculpture as such in several seals (Gill, Adi Granth Paintings, 2002).That means the Ragamala paintings may have existed simultaneously, or the Harrapan cultural resources may have undergone depletion for some reason. Besides it, the concept of Ragamala and Ragamala paintings started manifesting itself in the literature and poetry in Rigveda(4000BC), the oldest among all the authentic recorded works were available (Gill, Adi Granth Paintings, 2002).In Indian musically and literary manuscripts, Raga enhanced understanding with rishi Narda's description of music, the naradasikhasa text (Gardonio, Problems and Theories in the study of Indian Ragamala Paintings, 2017).

In the Sanskrit language, Ragamala Painting means 'garland of ragas.' each painting representing the ragas, a series of musical forms systematized in distinct methods. "The word raga is derived from 'ranjh', which means to 'color' or 'tinge', and can also refer to passion (Gardonio, Problems and Theories in the study of Indian Ragamala Paintings,

2017). Its origin concept, raga, means. color, humor, and delight, and the depiction of these aspects was a furthered subject in later Indian court paintings. Hence, respectively painting portrays a particular mood and in its different aspects and devotion. Ragamala paintings were constructed in numerous schools of Indian painting, starting in the 16th and 17th centuries, and are today named accordingly as Pahari Ragamala, Rajasthan or Rajput Ragamala, Deccan Ragamala, and Mughal Ragamala. This type of Painting reached an extreme development in the Painting of Kishangarh a small state near Jaipur ruled by another junior branch of the Jodhpur Rathors, in the time of Maharaja Sawant Singh who reigned from 1748-1757, he wrote many poems in the praise of Radha and Krishna and his court painter Nihal Chand painted for him picture of these divine lovers (Gray, 1955, p. 28). In Rajasthani Ragamala Chitra Parampara, Sharma referred to Bharata's Natya Shastra, a highly regarded classical text in India, which shows the harmony existing between different forms of performing arts and the incompleteness of meaning if they are performed separately (Santra & Maitra, 2018, p. 113).

Ragmala is adorned at the end of Guru Granth sahib, composed by Guru Arjan Dev Ji (fifth guru of Sikhism), describing six major Ragas. Each raga has five Wives and eight sons, so there are about thirty Raginis and forty-eight sons, respectively. The six main ragas are – Raga Sri, Raga Vasanta, Raga Bhairava, Raga Panchama, Raga Megha, and Raga Natta Narayana – each associated with specific themes on which musicians, painters, and poets create variations Ragas and their families.

The Ragamala painting, the visual representations of the fusion of two artistic modes painting and music depict the journey from impalpable to incarnation (Santra & Maitra, 2018).Although Bhairav Raga comes first in Ragamala, in Adi Granth, Sri raga is considered the first one.Some contemporary artists from Punjab have produced numerous artworks on Ragas. Dr. Ranjit Singh gill is a notable artist who has composed an extensive collection of paintings based on this subject. He has composed Ragmala Painting Series in Semi- Abstract Style. He expressed the praises of Sri Raga in colors in a mysterious way[Fig.1].Sri Rag also signifies an early dusk melody related to wintertime that summons a sober, meditative, and holy feeling. Sri Raga signifies the autumn season as well. As shown in the painting, the artist has combined bright yellow and orange colour with blue to create an illusion of dusk. It resembles the sun's rays are encountering the earth and exposing the 'anhad-nada' to unite a man to God by Sri Raga and eventually excite a sensation of devotion in the painting.

Raga Bhairava[Fig.2]is associated with shiva.Substantiating this specific raga with the form of Shiva is explained, keeping the point in awareness that even Lord Shiva is admired as Adi Guru, the most magnificent and oldest among the deities.Usually, in arts, Shiva is presented with two hands and three eyes. The holy Ganges is flowing gracefully through the thin hair wrapped around his neck. The crescent moon is shining on his forehead, and crawling snakes are in his hands. A garland of scalps drapes around his throat. Nandi bull is his favorite ride. At the same time, the trident and *damru* (drum) held in his hands recognize him. The *bani* extols the creator, who has all qualities (*satvik*, goodness; *rajsik*, energy; tamsik, darkness) yet it immune to them, it describes God's name as the source of bliss (Singh G. , 1998).Although, the four of the six significant Ragas viz. Malakaus, Hindol, Deepaka and Mega given in Ragmala have not been included in Adi Granth. But these Ragas have unique features which need to be highlighted.

Artists considered it necessary to compose paintings on these ragas respectively.After Sri Raag, Raag Majh[Fig.3]comes on the seventh number in Guru Granth sahib, composed by the fifth guru Arjan Dev ji.It is said that this Raga originates from Punjabi folk music in the region of Majha in Punjab. It expresses the longing for the return of a loved one and enthusiasm to meet him. The emotions generated by this Raga are associated with the love of a mother separated from her child. The mother seems to be grieving the loss of her child. This Raga brings a sensation of infinite love in life, and separation and sorrow represent it. In these compositions, Sea is important for both rhythm and harmony in waves as is Shankha (conch) a Symbol of Nada and all sawaras, a symbol of Lord Shiva- creater of Ragmala (Gill, Adi Granth Paintings, 2002).The artist has imagined this painting in an extraordinary way in which he has shown a lamp burning and a conch on top, which explains its spirituality.

The following Raga in Guru Granth Sahib is Raag Gauri[Fig.4)] which appears in the ninth position in the series. Gauri creates a feeling where the listener is inspired to endeavor harder to accomplish a goal. Nevertheless, the excitement formulated by this Raga does not permit the ego to increase.Hence, this Raga conceives an environment where the listener is encouraged to fulfill a purpose and simultaneously discouraged from being arrogant and selfimportant. In the composition, the artist seems to have created flowers in a mysterious style, and the dialogue of colours is stunningly presented in it. It is as if the petals of the universe are pointing to some hope. The Gurbani hymns under raga **Asa**appears on eightnumber page in Sri Guru Granth Sahib. Asa is five centuries old raga, introduced by Guru Nanak Dev Ji, originated from Punjabi Folk music in Punjab. There are potent sentiments of encouragement and inspiration in this Raga. It gives the desire to move forward by taking the necessary action to complete a purpose. It enables the audience to be vital to success.The actual state of this Raga determines that failure is not an option, even though no matter how difficult it may be to achieve a goal. Painting on Raga Asa[Fig.5] is wonderfully composed with the freshness of the sea. It resembles that these hues embrace each other in the ocean as if a new hope is happening.

Apart from these paintings, many compositions have been created on other ragas regarding Guru Granth sahib, which has a special significance in Sikhism.The custom of embellishing Ragas and Ragini's in India is very ancient. While contemporary painters have made a priceless contribution to illustrating these paintings, the assistance of the early artists in this regard is highly commendable. The great personality of Punjab, artist G. S Sohan Singh, also performed countless paintings on Raga and Ragini's. One of his compositions is based on Hindol Raga, in which a gorgeous young woman seems to be communicating in the sky. It resembles that her limbs are flourishing with intense pace and her flying scarf made the atmosphere more musical. These types of images on Ragas, created by him, are pretty admirable. Jaswant Singh was another surrealist artist who took an intense concern in the study of Raga and Ragamala and has given an innovative and visible configuration by brushed them meticulously. Jaswant Singh has yielded a distinct visual appearance to Ragas and Ragini's such as Raga Deepak, Ragini Lalit, Ragini Bhairavi, Raga Hindol, Ragini Bhopali, and many more. At the same time, these images expose the ragas' inner soul; they also generate enthusiasm for art admirers.

Barah Maha Paintings

Bara- Maha (Twelve months) is Based on "lyrics (hymns) of Divine Love." 'Bara' means twelve (12)and 'masa,' suggesting 'month.' The synthesis of Barahmasa was formed by Guru Nanak dev Ji in the Tukhari Raga registered 1107-1110 *ang* (page) in the Granth Sahib. Guru Arjan Dev Ji further followed it and wrote in effortless words in Raga Majh. This *Bani* (hymns) is read on the *Sangrand* (first day of each month) in every Gurudwara (a Sikh place of worship).

Bara-Maha is Similar to romantic poetry, in which the emotions of the human heart are expressed. Bara-Maha talks about the soul's passion for God, the agony of separation, and the ecstatic joy of union. There have been many other religious texts written about (bara-masa) twelve months.For instance, Kalidasa's *Ritu Sanar* and chitrasutra are outstanding compositions of this genreFor instance, Kalidasa's Ritu Sanar and chitrasutra are outstanding compositions that contain explicit guidelines for expressing the varying seasons. This glorious custom has been obtained in resembling miniature art in Pahari, Rajasthani, and Deccani styles had writings in *Devanagari* on top or behind the painting. India has variable climatic conditions throughout the year, dividing into six seasons, having an average period of two months. All these seasons are inscribed in this sequence; *Basant*, The Spring embraces the month of *Phalgun* And *Chaitra* (March and April), summer entails months *Jyeshtha* and *Asarh* (May and June), *Sawan* to *Bhadon* (July and August) signify rainy climate. Autumn commences with *Asu* (September) and the month of *Kartik* (October). Winter occurs from *Maghar* (November) to the first half of *Poh* (December) and remains to Early *Magh* (January). Barahmaha paintings personify the sensibilities of the meeting and detachment of these months. Along with it, every month conveys a particular Raga, reminiscent of distinct colors and flora and fauna, jungles, waterfalls, and streams, making up a captivating ambiance in paintings. Many artists in Punjab have chosen Barahmaha's *Bani* from Guru Granth as the subject of their paintings. Prominent artists are Davinder Singh, Dr.Ranjit Singh gill, Harjinder Singh Sidharth, and many more.

Davinder Singh formed a painting series based on Barah -Maha (seasons) by Guru Nanak in Raag Tukhari and Guru Arjun Dev in Raag Majh, assembled into calendars by Punjab and Sind Bank.For Devender Singh, the painting appeared as an inheritance from his father, a commercial artist. The son modified the art into transforming the Sikh religion's history into delightful compositions on the embellished surface. Apart from Sikh history, he has created infinite works on Punjabi culture, Hindu mythology, modern & abstract art with his aesthetic vision. In the Barah maha series, the line is crystallized in the Gurmukhi script, which heaves these paintings to another dimension. He described that seasons are closely associated with religions that expressed the Separation of The lord And Passions to meet God. The drawing figures are unique, which he received from his usual performed life forms that have rhythm in them, even the colors have been applied rhythmically that sustain the movement of lines.

For example in his famous painting on the month chetar, the lines inscribed are; "In chetu agreeable is the spring and beautiful the bumblebee. The forests are flowering in front of my door. May my love return home. How can the bride obtain peace when her spouse comes not home?" (Bains, 1995). This painting [Fig.6] beautifully explains the spring season, in which flowers are blooming on all sides. The cuckoo sits on a mango tree and speaks sweet words. However, the bride, who is separated from her husband, finds all this appealing waste. All the information artist wants to explain in this

painting is that the human being whose mind wanders away from God and is interested in the colorful spectacles of the world is spiritual death.

Spiritual bliss can be felt when God resides in our hearts.

Similarly, the next painting is based on the month of Vaisakh [Fig.7]. The painting describes through Guru Nanak's hymns that the beauty of nature also helps a person whose mind is connected by the esteem of God to assemble at the feet of God. The lines adorned on this paintings are, "Pleasant is Baisakh when the tree bough adorns itself anew. The bride is anxious to see God at her door, "come. Take thou pity on me." (Bains, 1995). The left side of the image shows the effect of greenery to illustrate the illusion of nature. Next to it is a woman standing in the form of a living soul who seems anxious to meet her beloved—the light-like colors on the right side picture the existence of God. Likewise, the artist has performed the artwork about each season with his incredible imaginative ability. Most paintings of this series signify God's existence as a symbol of "Ek omkar", which states that God is one and the figure shown in these illustrations seems the focus of this Composition, symbolizing a living soul that depicts that worldly embellishment as hopeless without God's love. The combination of all these ideas in itself is reaching the pinnacle of art. The artist effectively created these works with great intelligence and left an indelible mark on Sikh philosophy.

Apart from this, there has also been artist Dr.Ranjit Singh Gill, who portrayed Ragas and Barah -Maha based on Guru Granth Sahib. His creations on Baramaha seem to have a deep connection with the aspect of religion. Therefore, each of his works on Barahmaha renders one or another celebration as well as Raga. The art pictures a 'climactic appearance,' and the composition must be addressed in its entirety: the human characters, their posture and appurtenances, the creatures, the elements of the landscape, and the background of the illustration. These components contribute to interpreting the season and the specific verse to reveal the integrity of the Raga or Ragini painted. One of his paintings is based on Raga Bahaar [Fig.9] signifying the spring season, the month of April. In this painting, he has created a flourishing ambiance all around in which a lotus flower blooms on the head of a beautiful woman adorned with jewels and silken robes. The artist writes that "the spring weather is delightful, where bees hover all around and spreading a universal vibration. There are trees and bushes everywhere and the cuckoo singing in a pleasant voice when the fruits grow on trees, urging the artist's mind to paint all this beauty on canvas". He also tried to portray the sadness of detachment from the lord as like death.

Furthermore, various paintings have been made on other seasons based on other Ragas, such as Raga-Megha malhar for rainy weather and Ragini Gauri for the evening season, Raga Bhairva associated with Shiva personifies the month of May, and Ragini Bharavi performs the summer season. Each concept behind the painting has a special significance that paints the agony of departure from God and desire for religious admiration.

Besides this, Artist Harjinder Singh Sidharth, from Punjab, is a well-defined personality in art field.His compositions closely associated with classical Indian literature, folk ballads, mythology, music and poetry (Aura Art Tracks the Rise of Artist Sidharth, 2009). Zen, Sufism, Osho, Guru Granth Sahib, Tibetan Buddhism and Compassion of Madonna are the many facets of religious thought that have influenced

him (Aura Art Tracks the Rise of Artist Sidharth, 2009).His artworks are also assumed to reflect all distinct contents holding influential traditions, ideas, and beliefs by Sikh Gurus and Tibetan Thangka painters. For decades, poets worldwide have been writing about the season's rhythmic variations and evolving patterns.The names of months, based in an ancient dialect of Sanskrit, constitute the Nanak Shahi and the Punjabi folk calender (Barah Mah Series by Sidharth, 2008).[4] The artist has portrayed flora and fauna as his subject matter in Barah- maha compositions to illuminate the changing nature of the landscape. Moreover, he made most of his creations by producing his pigments from natural vegetable sources and minerals. Each colour symbolizes a particular time and sensations according to the season to show a flow of life.Sidharth expressed his ideas about the Barah Maha series amazingly in a conversation with Sushma Bahl.He has represented the painting on the month of '*Chetar'* in an ornate way. In the painting [Fig.9] the birds seem to be singing in harmony, and fresh flowers are in full bloom and amazingly embracing the coming season. The hues such as blue and green used in the image convey the peace and beauty of the weather. Tress, birds and social figures have executed a significant role in his artworks. There is another painting of this series in which is composed on the month of *Saawan*[Fig.10]It has a glimpse of young and green life. Black clouds hovered over the sky, signifying beautiful rainy weather. The vitality created by surrounding energy, fruit trees, sky, water, animal etc., has yielded a sensation of the supremacy of the universe. Somewhere along the way, his paintings became associated with religion and festivals too. For example, a picture [Fig.11] made while the month of Vaisakh portrays the figure of 'Hoe Maa'. It is a season where life and death go hand in hand. It is also referred to as sona means gold, and 'Mriyu', which means death. The figure in it personifies the golden wheat fields, expressing the radiance of gold all around.

Similarly, the painting on Falgunrepresents the celebration of life and the celebration of the soul. These are full of colour, music, hope and ecstasy. By creating all these incredible works, the artist made a spiritual contribution to the art world.

Painting Based On Hymns (Gurbani Verses)

Some accomplished artists have produced visual images to accomplishing the purpose of conveying the significance of Gurbani to the general people. Most notably among them is the name of Trilok Singh, who went deep into every aspect of the words and verses of Gurbani and endeavored to recognize its meaning and concept before illustrating any representation on it. Here is the impressive and attractive artwork of Trilok Singh in which the Gurbani words are addressed; "Like lotus flower floats and ducks the swims through the stream. Similarly, one cross over the terrifying world-ocean with one's consciousness focused on God's name". In the painting, Guru Nanak shows in the sky and leads how to float steadily opposite the world ocean by holding Lord's name in mind to commence a real-life to accomplish salvation. The lotus flower that grows out of the dirt is a symbolic form of pureness and delicacy. Dirty water symbolizes the worldly fascination in which swans and ducks are floating, yet they live uncleanly. Likewise, He performs extensive works on Gurbani verses such as "Saviour of the world," "peacock dancing," "nature its best, Freeda I seeking the Lord," "Air is Guru, and water is father and earth is mother." Artist Jaswant Singh is deservingly specifying whose affluent, energetic, and incredible proficiency concerning Sikhism conveys an impression of his personality. The vibrant hues and values, style, and forms revealed from the Sikh Scriptures succeed in conceiving a fascinated ambiance imbued

with a meditative environment. In his Paintings, the devotee, enthusiast, and seeker can be encountering the divine in the universe. In His Series 'the inner World',[fig. 12] and [Fig. 13] is appealing a brilliant combination of verses from Gurbani and dynamic shades. There is also a painting series created by the artist Hardev Singh consisting of ten paintings, based on a Shabad from Gurbani, "Meri sejariye andambar bnea",which means, "my bed is adorned in splendor", is the pride of every museum in the Sikh world. Moreover, numerous artists have various images of Gurbani, such as "Rangreta Guru Ka Beta" by Kirpal Singh and "The word is the truth" by M. Gurdit Singh. These are the supreme examples of this genre.

Conclusion

The above study demonstrates that Guru Granth Sahib has a vital place in Sikhism, and art compositions based on it provides further strengthen Sikhism.. This presents several works of art in front of the audience by performing a unique dialogue of Hymns and art. The artist conceives these paintings with a sense of devotion; the same feeling is envisioned in viewers' subconscious. These paintings are an essential part of Sikh legacy because they exhibit elegance, refinement, and excellence, a crucial artwork requirement. It also becomes appropriate to consider that there is an incredible influence of Sikh literary sources by prominent Sikh personalities like Bhai Kahn Singh Nabha and Bhai Bir Singh, which left a unique mark on the psyche of an artist. By a profound study of these sources, these artists have sowed the roots of modernity in the artistic field of Sikh culture. This information emits light on the deep relationship between Sikhism and art and immortalizes the priceless Sikh Legacy for coming generations.

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Figures

Figure 1
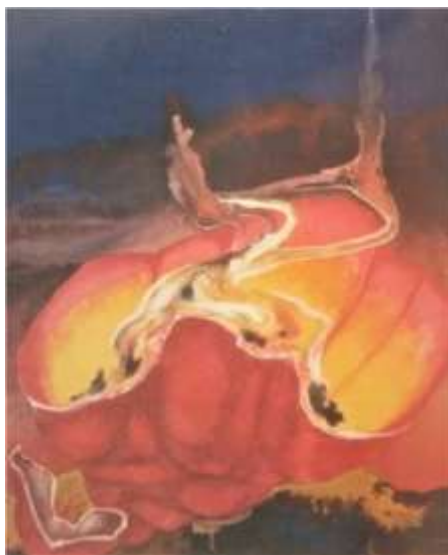
Note. 'Sri Raga', oil on canvas by R.S.Gill, in Adi Granth Paintings Raga- Ragmala& Barah-Maha (New Delhi: Aravali Books International(P) Ltd., 2002), 62.

Figure 2
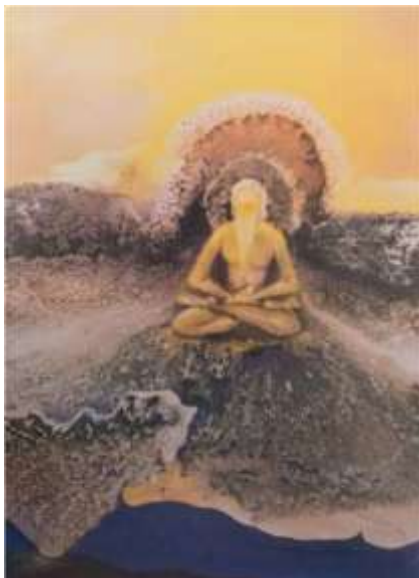
Note. 'Raga Bhairava' oil on canvas by R.S.Gill, in Adi Granth Paintings Raga-Ragmala& Barah-Maha (New Delhi: Aravali Books International(P) Ltd., 2002), 159.

Figure 3

Note. 'Raga Majh', oil on canvas by R.S.Gill,, in Adi Granth Paintings Raga-Ragmala& Barah-Maha (New Delhi: Aravali Books International(P) Ltd., 2002), 64.

Figure 4

Note. 'Gauri Raga', Oil on Canvas by R.S.Gill, in Adi Granth Paintings Raga-Ragmala& Barah-Maha (New Delhi: Aravali Books International(P) Ltd., 2002), 66.

Figure 5

Note. 'Raga Asa', Oil on Canvas by R.S Gill, in Adi Granth Paintings Raga-Ragmala& Barah-Maha (New Delhi: Aravali Books International(P) Ltd., 2002), 66.

Figure 6

Note. 'Chetu' by Davinder Singh, Oil on Canvas

https://www.sikhiwiki.org/images/9/9b/Chet.jpg

Figure 7

Note. 'Vaisakhu' by Davinder Singh, Oil on Canvas
https://www.sikhfoundation.org/wp-
content/uploads/2012/10/cal2013review/calendar2013-gallery/thumbs/SFcalendar-full-
5.jpg

Figure 8

Note. 'Raga Bahar' (Spring Season), Oil on Canvas by R.S Gill in Ragmala Painting-
A journey from Music to art. First. (New Delhi: Arawali Books International (P)
Ltd.:2006), 63.

Figure 9

Note. 'Savan' by Sidharth, Oil on Canvas
https://uddariart.files.wordpress.com/2008/08/sawanb.jpg

Figure 10

Note. 'Chetar' by Sidharth, Oil on Canvas
https://uddariart.files.wordpress.com/2008/08/chyet1.jpg

Figure 11

Note. 'Vaisakh' by Sidharth,Oil on Canvas
https://uddariart.files.wordpress.com/2008/08/s-waisakh.gif?w=665

Figure 12

Note. Inner World by S Jaswant, 04" 36" X48", Acrylic on Canvas
https://fineartamerica.com/featured/inner-world-04-s-jaswant.html

Figure 13

Note. Inner World by S Jaswant Singh, 11, 24" X 36", Acrylic on Canvas
https://fineartamerica.com/featured/inner-world-11-s-jaswant.html

A Study of Punch-Mark Coins Graphic Symbols for Design Application

Rahul Deshpande

Abstract

Punch-mark coinage is a form of currency that was used in ancient India. It was produced by small states called Janapadas all over India for trade and business. The birth of the Magadha Empire gave rise to the use of Punch-mark Coins around the 5th Century BCE.

These Punch-mark Coins were mainly produced by using Silver metal and were struck repeatedly up to nine times on both sides of the coin using bold, miniature marks to denote Bankers, Merchants, or Political officials. Punchmark coins were of different sizes and were made of different fabrics and metallic alloys. Small fragments of these coins have been found in rectangular, oval, roundish, or droplet shapes. They are known as Karshapana.

These marks on the Punch-mark Coins have a strong graphic quality that can be easily adapted to modern design tools. These graphic forms are identified by scholars as original Indian forms produced by local artisans without any western influence, thus reflecting a strong cultural aspect. There are a variety of forms ranging from geometric, floral, animal, bird, human figures, weapons, fish, trees, etc. This provides numerous creative possibilities to encompass a wide range of designs in different forms and materials.

The current research is a study of the visual and aesthetic values of the symbols on these Punchmark Coins and explores the possibilities of adapting them in contemporary design practices.

This study is carried out to find out various applications of this rich treasure of graphic forms.

Keywords: Punch-mark Coins, Karshapana, Numismatic Graphic Symbols, Ancient Indian Coinage.

Ancient Coinage of India

Punch-marked coins are the earliest known coinage found in India. They were made and put into circulation by traders, bankers, and political authorities from various small *Janapadas* (realms, republics, kingdoms) existing around 600 BCE. The birth and rise of the Magadha Empire (400 BCE), which spanned from modern-day southern Bihar to the Ganga Valley, saw a boom in the production and usage of these punch-marked coins.

The fertility of the Ganga Plains made it possible for farmers in the region to produce two to three crop yields in a year, which led to greater prosperity in the region. It can be surmised that this surplus in produce led to greater trade, and the local economy thrived. An increase in economic activity created the environment and freedom for artisans to create and develop art and craft in highly innovative ways. A variety of textiles, earthen pots, metal crafts, jewelry, weapons, items of woodwork, instruments for agricultural needs, musical instruments were created by craftsmen for trade and business. As the Magadha Empire expanded in power and influence to the north, west,

and south, wider usage of punch-marked coins followed. This is why these coins are found almost all over India. The Nanda kings, followed by the Maurya Empire – with prominent emperors such as Chandragupta, Bindusara, and Ashoka – brought the glory of the Magadha region to its peak in around 230 BCE. This rise in political influence, geographical expansion, and diffusion of cultural activity all contributed to the widespread usage of punch-marked coins in this region.

'The immense volume of Mauryan coinage was necessary, not just to pay a large standing army and a great number of civil servants, but also to facilitate the further growth of trade. Artisans were divided and placed into guilds, or Shrenis, and their products had to be paid for in cash (1). Experts in Mauryan coinage have concluded that the graphics and symbols used on the coins found today were created by local artists as a form of personal signature, not unlike a maker's mark. The symbols are astonishingly rich in variety and yet simple in their graphic forms. They represent human beings, animals, birds, trees, insects, fishes, celestial bodies such as the sun, geometric forms, plants with roots, ships, wheels with spokes, weapons, etc. Scholars have identified about 625 different forms used for punch-marked coins of the Magadha Mauryan period [H2]. Among these, a unique symbol known as a 'six-armed' symbol has up to one hundred and four variations. This demonstrates not only the dedication of the craftsmen but also the breadth of punch-mark coin usage.

These graphic symbols are pictographs with their beauty of form. Strong graphic qualities, variety of forms, and a strong connection to an idea of 'Indian-ness' suggest the possibility of these symbols being used in modern graphic design in several applications.

Literature Review

Punch-marked coins used in ancient India are unique in their characteristics because only these coins made use of pictographs, unlike Greek or Roman coins of that period which used text and portraits. These coins were in circulation mainly in the Indian subcontinent, and there appear to be no examples of this type of currency outside of this region.

Ancient coins have been extensively studied (e.g. [3], [4]). However, to the best of the author's knowledge, punch-marked coins have been the subject of a systematic and in-depth study carried out by only a relatively small number of researchers. Prominent among these are Dr. Parameshwari Lal Gupta and Mr. Terry Hardaker. Their books (Gupta and Hardaker, 2014, and Terry Hardaker, 2019) are the main sources of available information on punch-marked coins.

Gupta and Hardaker [1] note that the Magadhan Silver Karshapana (Series I to VII) bore five official punchmarks and weighed approximately 3.4 grams. The complex geometric designs of the early coinage were replaced with simpler motifs representing real-life objects. This representation of real-life objects led to a wide variety of graphic marks, according to the subject matter. These marks represent a strong connection to agriculture and man-made products. 'The symbols reflect a primarily agrarian society, in which the elements of nature loom large: animals, birds, fishes, reptiles, insects, trees, and plants of many kinds' (1) Other geometric symbols are associated with religious, mystical, and ritualistic practices. Some symbols appear regularly and in a particular sequence and others are rare in their frequency.

Punch-marked coins are divided into seven series by scholars [1,2]. The changing pattern of using graphic symbols is one of the criteria used to identify the timeline of the coins. Hardaker [2] proposes that although the coinage begins with purely abstract symbology when material objects start to appear they paint a picture of a predominantly rural population, but with occasional urban artifacts reflecting and specialized industries that were emerging.

Representations of the human figure make an appearance at a later stage and have aroused special interest [1, 2]. Towards the beginning of the Mauryan Period, many different marks depict the human figure in series V and VI. Probably all are intended to represent deities such as Vishnu or Krishna, rather than living individuals [1, 2].

The array of graphic marks created by craftsmen and artisans of that bygone era have a fascinating pictorial value that can be incorporated into contemporary art and craft and design practices, using different materials and modern technology.

Result and Discussion

As a graphic designer, I found that these forms have a lot of potential for application for various design branches. The bold, graphic, simplified forms with little decorative flair are the strong points of these forms. These characteristics make these forms easily adaptable to a variety of two and three-dimensional forms in a range of materials.

The original forms on these coins are minute in size. To use them for graphic design, they are first duplicated, by hand, to maintain the original beauty of the symbol/s. These symbols are presented in two formats – solid shapes and shapes outlined in bold lines.

Scanning these symbols onto a computer allows for the creation of designs by repeating the symbols in different patterns, and these patterns can then be used to create various designs.

Scope Design Possibilities
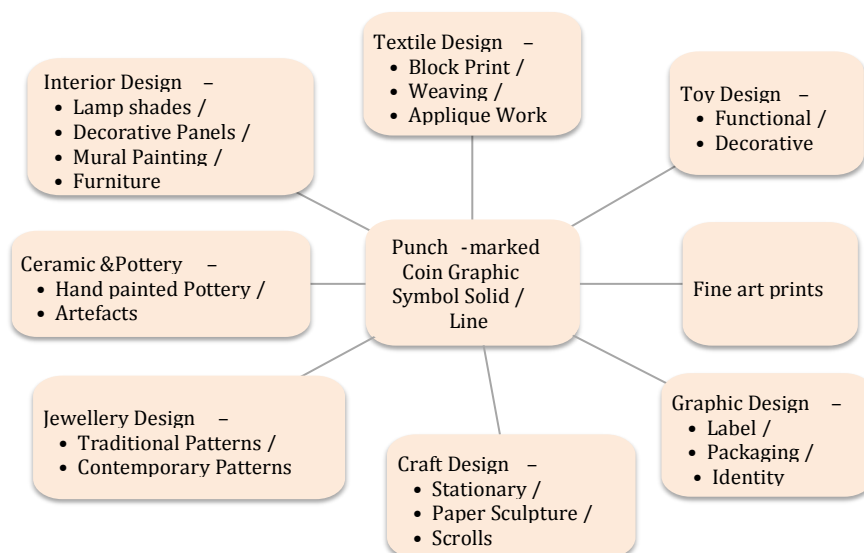
A few samples have been created using computer graphics programs, primarily for textile graphic designs, to demonstrate the adaptability of these patterns for modern design needs. These patterns can be used for a vast range of products and can be used on three levels of commercial consumption. Villages and urbanizing towns are upcoming markets for such products, as are larger metropolitan cities. These designs also have the potential to be used in the creation of souvenirs and other specialized handicrafts, which can be used to capture the tourist market. These different levels of distribution and consumption will ultimately help to boost the craftsmen and artisans of India.

The potential application of punch-mark symbols can be anticipated in two design branches: Interior Design and Textile Design. Details of these applications are listed in the table below:

Interior Design	Textile Design
1. Furniture Design	1. Woodblock printing
2. Decorative panels	2. Weaving
3. Mural Painting	3. Embroidery Work
4. Fine art Prints	4. Applique Work
5. Wallpaper design	5. Hand woven carpets
6. Tapestry Design	6. Furnishings
7. Lampshades and other Decorative Objects	7. Batik Work
	8. Design for T-shirts and Bags
	9. Textile Printing as Fine artwork

Conclusion

Although the graphic symbols used on punch-marked coins are about 2500 years old, they are original Indian forms created by the artisans of that period. These forms are very rich in their aesthetic as well as graphic value.

Due to their bold and simplified nature, they are easily adaptable for various design streams. They can be in fashion by designers for both ethnic and contemporary looks to suit modern needs. This range of adaptability makes them unique and exciting for designers to work with. These designs can help create a strong link between designers, craftsmen, and toolmakers, resulting in a unique product range for the contemporary market. This implementation of punch-marked coin graphics can help revive dying crafts and boost craftsmen and toolmakers who depend on their knowledge and cultural heritage for their livelihoods. There is endless scope for creativity and search for the application of these punch-marked coin graphic symbols.

- Keyur Sahasrabuddhe

for their valuable help for this research paper.

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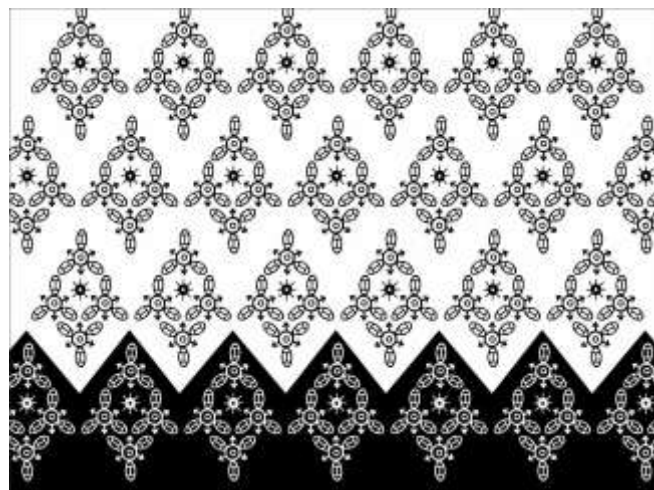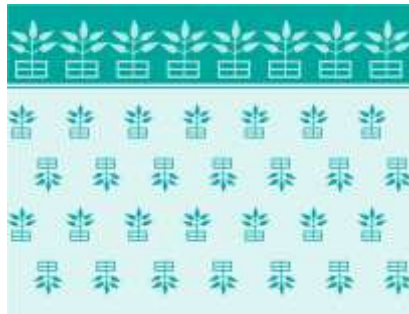
Textile Pattern 4
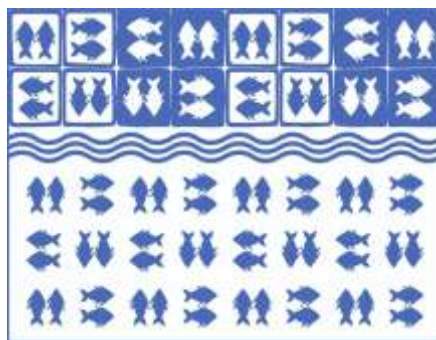
Logo Design

Some of the punch-marked coins symbols

Understanding the Value of Arts Education and Appreciation in Order to Improve a Student's Intellectual, Psychological, Emotional, Social, and Physical Development

Ranjit Jagtap

Abstract

The changing approach towards teaching and learning in modern times, its scope and the need of the subject of Art in school life, its significance as also the status awarded to Art in the National Curriculum Plan of 2005 opened my eyes to do the research in the teaching of Art to younger minds. "Education through Art, education in Art and Art as education" was the three-tier formula offered by the State of Maharashtra in the syllabus of teaching Art. Taking into consideration the significance of the syllabus of Art, its implementation at primary, secondary and higher secondary level students to acquire knowledge in the subjects of their specific interest or to pursue Art education as a profession in later life, this research aims at an in-depth knowledge of teaching and learning process. In lieu of the infinite scope of education a wide range of topics have emerged from the objectives of education and in General Art education. In particular, the concept of evaluation, teaching methodology, psychology, organization and management of schools, environment, field visits to innovative projects etc. is few to state. The Indian thought process, the Western influences, the values of Indian culture; the goals of our educational system and core have all been taken into consideration while doing the research in this area. A discussion on the principles of education and psychology invariably is founded on the philosophical & educational thoughts and ideas of educationists. Only then can one appreciate fully the ideas and views put forth by them. This makes it imperative therefore to study those educationists who have played a major role in identifying the goals and policies in the field of education.

Educational objectives are comprehensive guidelines for evolving an educational process that complements the ideals and principles approved by a particular society. They reflect the aspirations and the permanent values as also identify the needs of a particular society. The educational draft of the year 2000 provided guidelines for the educational objectives at school level. For a student-centered approach it recommended educational objectives that are beneficial to the physical, psychological, social and emotional development of a student in accordance with their age group.

Art and craft education has been given a significant consideration as an activity towards personality development of the students. Developing the aesthetic sense and offering aesthetic experiences are the basic functions of the subject of Art and hence they have been incorporated into the syllabus in Art. This only highlights the significance of Art in student life. Art and craft enables students to express themselves through line, colour, shape, pace and sound. The study of Art and cultural heritage are two sides of the same coin and complement each other. Education of folk music and folk art create awareness of the national heritage. In effect the cultural heritage, the Indian independence movement and environmental protection and the values related to these principles are comprehended better. Music enjoys a special place in the fine Arts. Music familiarizes the student with the rhythm, subtle emotions, values and pleasant utterances.

"Art is beauty, beauty is harmony and proportion," stated Alexander Baumgartner, a brilliant German philosopher. While philosophy is concerned with the concept of truth, the fine arts are concerned with the concept of beauty. Perfection is implied by beauty. Art denotes total purity. That is the kind of beauty that inspires devout and auspicious ideas in everyone's mind. Art directs one's ideas in a positive direction. All art strives for moral purity, which necessitates the use of harmony and proportion. Art plays an important role in physical, social, psychological, and cultural growth, as well as individual development, reciprocal interactions, and value maintenance. It supports the student's activities, creativity, and interpretation, as well as his natural curiosity, practical experience, and production, and establishes communication with society and the rest of the world.

Sport is defined as any activity in which the participant fully participates. It's a natural way of behaving. Art is a sport in its own right. "Art is the highest means of understanding," stated Friedrich Schelling, a prominent German philosopher and educator. Art may be used to provide education. For a child, art is a sport. When knowledge is obtained through art, it is acquired faster and lasts longer. Johann Winckelmann, a German archaeologist and art historian, believed that beauty can be divided into three categories: shape, idea or imagination, and emotion. Only in the presence of the first two types of beauty can the third type of beauty arise. The ultimate goal of all art is found in the beauty of feeling. It is the teacher's responsibility to assist the learner recognize this beauty and instill it in him. Beautiful feelings will help him to develop principles that will benefit his family and society as a whole. As a result, the purpose of all education, namely the preservation of human and moral values, will be achieved. A student's appreciation of the relationship between nature and human life will be enhanced by the beauty of emotions. "Art is the effulgence of emotion," it has also been claimed. This emotional outpouring takes the form of line, colour, and shape coordination, as well as speed, musical notes, and words. All of these elements have a lovely sense of unity, harmony, and rhythm. Emotions can bring people together in their feelings. "Art is the expression of the ultimate unity," Sane Guruji stated. Art can assist in achieving the goal of national emotional togetherness.

Art and Craft bridges the gap between one and many people. Art and Craft has the power to bring people together. Art is a means of expressing and enhancing freedom. "Artistic sense is the power to appreciate the beauty in nature," declared Giuseppe Pagano, an Italian aesthetician and artist. The goal of any art education is to develop this ability. Mahatma Gandhi remarked, "All forms of finest
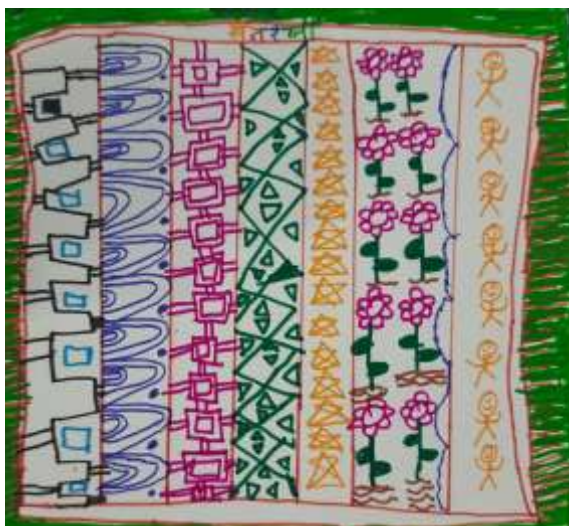
Image ref: A beautiful pattern created by Author's 6-year-old nephew. An excellent example of expression of Art.

art are manifestations of the very spirit." "Beauty is not in the appearance but inside the heart of the beholder," wrote German philosopher Johann Fichte. The essential activity of all Art is the external manifestation of this lovely spirit. Art is intended to mold not only the mind but also the complete life. The goal of art education in school is to create opportunity for students to bring about a manifestation of the soul, to provide scope for creativity, and to give expression to the student's untapped emotions, unfold them, and bring about an all-around development. After determining the objectives, the teacher can choose his teaching approach. One of the goals of teaching Memory Drawing, for example, is to help students enhance their ability to express themselves. A teacher might design activities such as memory drawings, historical, mythical, or imaginative themes and narratives, developing a story or expanding an idea on the basis of the given elements, and presenting it in the form of pictures to achieve this goal.

Another goal is to improve the student's ability to design. It will be necessary to explain and employ symmetrical and asymmetrical composition in order to achieve this goal. Students must be able to discern minute distinctions in lines, colours, and shapes, as well as apply symbolic shapes for a specific design, as well as realistic, ornamental, geometrical, and abstract shapes in a composition. By include these exercises in the curriculum, the instructor can assure that the student's behavior changes. The teacher's working style, the numerous educational instruments, and the student's work are all part of the educational experience. Colors arouse innate interest and intrigue in children. The teacher should use this instinct to help students understand shapes and colours, as well as to develop a sense of texture and refine their sense of touch. He should cultivate the ability to enjoy beauty through all five sense organs, as well as give opportunities for it. Color and shape compositions are the best ways for children's talent to bloom. Their imaginations must be sparked by the teacher. Children's composition style and inventive attitude are real treasures. These are natural abilities, but they must be nurtured via art. Through training in well-balanced composition, harmony, and melody, the instructor must assist children in developing artistic concepts from school life.

Experiments and practical are an important aspect of Art and craft teaching. In the modern times the various effective tools of teaching and learning have underlined the importance of experimentation and practical. This also goes to highlight the significance of self-study. It is the need of the times that the novices and aspiring Art teachers need to develop the habit of self-study for their upgradation.

The Art and Craft teacher and experiments are two sides of a coin. With regard to experiments the Art and Craft teacher has to work at three stages.
1. Make the pre-preparation.
2. Demonstrate the experiment to the students.
3. Get the experiment done from the students.

Following the Art teacher's demonstration or experiment, the pupils should conduct their own experiment. On the basis of the conclusions gained from the teacher's demonstration, they may even come up with fresh results or discoveries. Although it may be too early to expect such a result at the school level, it is also true that experimentation might provide unexpected consequences. Students must be given ample opportunity for experimentation and innovation. For example, the Art teacher could draw a flower on white paper with a white crayon and then paint it black. Color will not absorb into the crayon-covered area. The teacher can then invite the pupils to

repeat the experiment using different shapes after demonstrating this. There will be no creativity or freshness if all of the pupils repeat the experiment with a floral drawing. The art teacher must promote creativity. Prior to the experiment, he should notify the students of this so that they are excited about the possibility to innovate.

Man's memory is a gift from nature. The emptiness is frowned upon by nature. It is because of this phenomenon that nature bestows such talents on children's minds. Observation, touch, and sight experiences are stored in one's memory and recalled at the appropriate time. It is the teacher's responsibility to single them out and offer them with the right opportunity, facilities, and materials. The student must be able to create many types of decorative objects and draw designs. He must demonstrate the ability to preserve cleanliness, decorating, self-discipline, and beauty in all areas of the school, including classrooms, the Art Room, the school grounds, houses,

Image ref: A beautiful pattern created by Author's 6-year-old nephew. An excellent example of composition and design fundamentals.

towns, and cities. Allow the pupil to see that beauty may be generated via our words, actions, designs, and presentations. The environment will be automatically embellished by the beauty in the children's imaginations. The teacher must understand that what he sows is what he will reap. Beautification includes things like recording experiments in a diary, creating diagrams, and keeping things neat. Beautification also includes a well-organized display of artefacts in the classroom or at home. The process of beautifying should not be limited to the pages of a textbook; it should become an integral part of students' daily lives. It needs to show up through his actions. Only then may the Art instructor claim to have completed all of the syllabus's objectives in the discipline of Art.

Education should be the springboard for a student's successful life. Evaluation should provide a surefire way for obtaining a reliable assessment of the educational process's success. It is in this context that evaluation should be seen. All approaches that examined a small number of talents from the past to the present have proven ineffective. They failed to offer a complete picture of the students' personality development, talents, and educational success. Even before beginning the syllabus, a teacher can achieve the goal of assessing the response in connection to educational progress by devising not only the assessment tools, but also the criteria and methodologies of evaluation. Rather than focusing solely on a student's level of success, the teacher studies a student's many facets in numerous subjects and comprehends the nature of the student's accomplishment in them. The teacher should synthesize, analyze, and describe the numerous evaluation variables. A teacher must assess the extent to which the student's talents have developed in relation to the

numerous objectives set at different stages of schooling. He must improve the teaching learning process, as well as the teaching instruments and strategies, as a result. A teacher must engage in self-evaluation while teaching and keep track of the daily teaching and communication requirements. Specific exams can readily be replaced by everyday observation and evaluation. To do so, the instructor must keep a diary and do numerous overall evaluations on a daily and weekly basis.

Conclusion:

It is true that quantitatively evaluating every aspect of the curriculum is impossible. That may appear to be in opposition to the educational process. This area includes fields such as activity, physical exercise, dance and drama, vocal instrumental music, painting, sculpting, and handicrafts, among others. As a result, the linked courses and activities in the syllabus have been given a lower priority. Materials and syllabus planning either do not provide enough or are insufficient for the disciplines. Principles, institutional heads, and the government do not appear to be paying attention. Furthermore, the Arts times are frequently used for Science, Math, English, or extracurricular activities. In fact, many schools do not even hire art teachers. All of these reasons undervalue the subject's instructional importance in the curriculum. Their potential is being squandered, which is a big worry. Thankfully, the new syllabus recognizes their importance.

The term "evaluation" does not refer to a set of labels such as "pass" or "fail," but rather to a set of guidelines for future actions. It's a meter for determining whether or not behavioral changes can or should be made. Not only evaluation, but also issues such as educational theory, psychology, school organization, and management aid the art teacher in molding the personalities of pupils, the instructor, and, as a result, the entire society. The education should try to develop responsible, wise people, and studying how to teach art is a step in that direction.

Conflict of Interest: Not applicable

Ethical approval: Not applicable

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Conceptualization of the Meta Framework for Sustainable Graphic Design In the Context of Reducing the Digital Carbon Footprint[*]

Manish Arora, Peeyush Kumar Gupta & Jyoti Saini

Abstract:

The broadcast of advertisements on the Internet also contributes a considerable amount to digital carbon emissions. However, there are practices that can be adopted to reduce the digital carbon footprint; such as sustainability, which is being successfully applied in many genres of design. Graphic design goes about transmitting advertising messages to a massive population and all resources available are used for that. The Internet is one of them and the advertisements broadcast on it have been termed as digital advertising. Due to which the frequency of their transmission is very high, which eventually absorbs a large amount of energy. By reducing such energy consumption, car emissions can be reduced or controlled. For this, he was consulted with graphic designers from India, in which it was found that they lack information about sustainable graphic design strategies; while they are environmentally conscious. Therefore it was observed that there should be an in-depth strategy for sustainable graphic design; So that the graphic designer can be well informed and educated. A theoretical blueprint of a meta-framework to conceptualize this in-depth strategy is highlighted in this study.

Keywords: Digital Carbon Footprint, Digital Advertising, Sustainable Graphic Design

Introduction:

As it is well known that the environmental issues are increasing day by day. The environmental concerns are coming out from various ways. In this context the digital carbon footprint is new term occurs in the surroundings. Transmission of data on internet is majorly responsible for carbon emission and such carbon emissions are termed as digital carbon footprint. Advertising is one of the major sources which is responsible for ill-effect on the environment. Hence the advertisers do advertising for their ultimate goal for influencing the consumers for making immediate purchasing decisions so it is a regular practice to run the advertising frequently on the internet platform such as social media. It has been researched by the researchers that the every query made on internet will consume electricity at many where (at least where the user will visit at the asked content) and electricity consumption is core of digital carbon emission (Andrae, S. & Edler T., 2015). In any frequent run advertising need more transmission on the internet and as it will be viewed by the internet users as many times the electricity will be required for the related process. Other than the frequency of advertising run, some significant factors in the graphic designer created for advertising is also responsible for more electricity consumption. Like some color code consumer more energy in screen displays; for instance white consume maximum power and blue consumes minimum amount of energy. Therefore it is very urgent to understand what a graphic designer can contribute in the reduction of carbon footprint through digital platforms.

It was observed during the previous research on this subject that most of graphic designer are unaware of the carbon emission through advertising graphics; while after knowing about this they desired to do their design practice to make a positive impact on the environment. After reviewing the opinions of graphic designer in considerable numbers, it has been observed that there is a need of developing a Meta framework of sustainable graphic design.

Review of Literature:

Digital Carbon Footprint:

Digital resources and services have become an important and integral part of daily life these days. There are many facilities in the Internet which are accessed for daily use. The only thing to do is that their consumption is more than expected. One of the biggest reasons for the shift to digital was to prevent environmental degradation caused by physical activities. Since it is intangible, its side effects do not go unnoticed by the users. While it is dependent on a large amount of energy to operate all the functions; The main source of which is electricity. Due to which an abundance of carbon is emitted from this area, which is not working as an alarm bell for Mother Earth in future. In this way, the carbon emitters have been given the name of digital carbon emission (Stolz and Jungblut, 2019)

Digital Advertising and Carbon Emissions:

The increasing reliance on the Internet and its simultaneously capable means of communicating to a large population has made digital marketing an essential practice at present. In which marketers now see the future for sales and promotion. One of the main reasons for this is the ease of measuring ROI (return on investment) with SEO (search engine optimization) through artificial intelligence and data analytics. Its cost-effectiveness is also one of the main reasons why marketers are attracted to it (Lath, 2021). According to Pärssinen, M. et al (2018) Digital advertising also has a global impact that is multifaceted. The transmission of digital advertising requires the Internet, for which it consumes significant amounts of energy, which negatively affects the environment in the form of CO_2e emissions. The imperative of industries in economic development is a vast extension of advertising, which is a multi-billion dollar industry itself. Being such a huge industry, it consumes every means that can increase the income of the companies. Due to the popularity of opportunities on the Internet, it is being used a lot. Due to which a huge amount of carbon emissions are being done.

Sustainable Graphic Design:

In an article "Sustainability and Graphic Design" published online in Coomart, author Phil Hamlett observes that a graphic designer who is familiar with environmental problems and knows that as a professional, he can do at least a little to prevent environmental degradation, in this context he first thinks about the paper, whether the design he has made for the advertisement will be printed on recycled paper or not. He does not have any control over this concern of the graphic designer because after designing, he has no role in printing, post-communication, etc. So if a graphic designer adopts the same approach towards sustainability as in other disciplines, it can also be a positive step towards an environment (Elmansy, 2017). Sustainable practice in graphic design offers a wide range of design ideas other than ink and paper. Because

Sustainable Graphic Design is an approach to a design process in which the environmental impact of the design is considered.

Need of Meta framework:

The complexity of the definition of sustainability has made it difficult to apply it appropriately in many disciplines. That's why graphic designers need a more expansive strategic framework, despite the full knowledge of how to approach sustainability or social innovation in their designs (Boylston, 2015). In which an action plan to incorporate all the essential components of sustainability into the design, so that the method and the meaning of each action can be properly communicated to the designers. There are many tactical tools in the context of design which are participatory design, co-design and trans-disciplinary; which provide ease to the process of design. Manzini and Rizzo have addressed some such design tools in their study such as Frog's Community Action Toolkit, IDEO's Human Centered Design Toolkit and Dan Lockton's Design (Manzini, et al, 2012). Just as frameworks have been developed to translate sustainability into product or service design, graphic design that is intended to be created for advertisements also requires the development of a meta-framework that is capable in translating the important factors like material, Subject & Message Manifestation and Recall Element etc.

Data Collection & Research Methodology:

In order to conceptualize the meta-framework of flexible graphic design, some questions have been developed based on the theoretical studies observed. The questions were asked by previously informed 30 graphic designers about digital advertising, digital carbon footprint and ease of use. It was later analyzed by the opinions of graphic designers and observations available in the literature. Two main criteria were set for the selection of the respondents; which is the following:

 i. They are either Graphic Designers or Graphic Design students,

 ii. They should already have knowledge about digital advertising, digital carbon footprint and sustainability.

An online interview session (on webex personal room) was conducted to elicit responses, in which each participant took an average of half an hour. In this, the age group was not ensured in any way and they were selected from all corners of India. The personal contacts of the researcher were used for the selection. Their open-ended answers were first checked manually and then with the help of software (Nvivo Pro 12) to measure their validity.

Research Findings:

As Manzini and Rizzo refer to some of the design toolkits that help design implement the broader term of sustainability (Manzini, et al, 2012), a strategy to bring sustainability into a regular and effective practice in the graphical context There should be an action plan through which the design can get a proper guildeline of what they should and should not do. Graphic design contributes to the advertising industry as a key visual communicator and marketing tool. In this the application of sustainability can bring an effective change. Graphic designer sustainability has a wide range of applications in both digital and traditional graphic design; which is applicable not only to the design material but also to the design itself (Elmansy, 2017).

Graphic Designers' Concerns:

The graphic designer was asked what approach is adopted when designing in the context of the environment; in response to this, his biggest concern was that, not all of them know what to do. In his opinion the environmental damage caused by graphic design can be mitigated by controlling printing; over which he has no control as a graphic design designer. While emphasizing on the same digital advertisements, his reaction was that it is more environmentally friendly than print. During the interview, when it was pointed out that there is a very high frequency of digital transmission to achieve pre-set goals from advertisements, which is ultimately responsible for the huge amount of carbon emissions. So in response, they told themselves to be unaware that in reality they do not know what they should do. For example, when the correct applications of colors were told the different amounts of energy consumed by the display of graphics on the screen, they were surprised to learn and according to them, they immediately found a way that using in graphic design they could save the environment. A little positive effect can be given. Based on these discussions it is easy to find out that lack of awareness is the biggest factor and if an effective action plan is disseminated in this context then sustainability can be brought widely in the practice of graphic design.

Meta-framework for Sustainable Graphic Design:

An in-depth strategic action plan is needed to effectively follow laxity in graphic design. In a sustainable design the strategic framework should have some significant aspect; the design should be mitigative, adaptive, resilience and positive impact oriented (Stebbing, 2015). This model can be implemented in construction of sustainable graphic design as follows:

Mitigating the graphical elements: A visual image is worth a thousand words is such a cliché proverb. The meaning of quoting it on this is that simply filling a lot of textual content in the graphic does not make an effective communication, it will require extra time to understand or watch it, if it is in the video then it will be read to watch it again and again. One, the viewers on the Internet would have skipped them and hardly anyone would want to see it again to understand it. As a result, it will have no effect and it will be considered as a failure from the point of view of communication. If in any case the frequency increases it will absorb more energy; As a result, the emission of carbon will be natural. Therefore minimum usage of text, resolution of pictures or illustration, bleeds and bright colors will reduce the carbon impression while its transmission on internet. Use of inforgraphcs instead of texts will be better option for sustainable graphic design.

Adaptive design construction: Any industrial activities that have taken place by ignoring the environment will definitely worsen the situation. As the unlimited use of digital or internet has given rise to a new debate which is digital carbon footprint. In such a situation, it should be mandatory in all disciplines that it should be adaptive towards the environment. In the same way, there should be adaptiveness in graphic design. According to Kruse (2006), the incorporation of adaptiveness into any design can leave a significant impact on the design environment. It can help in taking any action in humans that prevents environmental degradation. Solutions or alternatives to the problems that have already been identified can be prepared. Graphic design communicates to a mass population. Graphic design can play a key role in making

environmental decisions for consumers to purchase, consume and post-consumption products. The same knowledge of all the factors of environmental degradation is with Mankind, so what effective steps can be taken to deal with it can be communicated to it. In addition, more importantly, measures can be taken to control the carbon emissions caused by advertising on the Internet, such as reducing transmission frequency by incorporating the recall element into the graphic design; which leads to less carbon emissions.

Resilience graphic design: It is useful in discovering new options for the process of designing and their applications. Relative resilience is a new concept in which many different theories are considered. It can be used in many ways in graphic design, such as when building a website, keeping in mind that it can also be printed in the future; White color absorbs the most energy on the screen and blue the least so the screen should use the least amount of white. At the same time, when it is to be printed, it should be converted into an adaptive design pdf or any relevant format, in which maximum use of white color is used because its negative environmental effects are less. Through resilience, graphic design can not only be made positive towards the environment, but it also inspires its education or training. Graphic design should incorporate ecometrics to mitigate environmental change (Sampson, 2013); as such ROI should be monitored continuously and the end target of digital ads should be fixed in numeric figure and key performance indicator should be fixed.

Positive impact oriented graphics: Graphic design is the portrayal of advertising messages; which has an impact of its own. There should also be a manifestation of such facts in these messages which can make a positive impact on both the environment and the society; Such as giving information about major environmental problems, showing the complete veracity of the products, avoiding the design of advertisements for those products which have adverse effects on the environment and society, using messages keeping cultural and community dignity in mind, Informing and motivating consumers to adopt environmental remedies.

The end-to-end graphic design process consumes many resources; Such as water, paper, ink, energy, solvents and packaging. One way to reduce the environmental impact of advertising is through sustainable graphic design. The color, size, paper and printing style adopted by a graphic designer in the design determine the size of the carbon footprint. It is a better option to use all these as low carbon emitters in graphic design with the aim of making a positive impact on the environment' such as use of recycled paper, proportional use of colors for digital, VOC (volatile organic compounds in printing) Abandoning ink containing) and preventing energy wastage during designing work.

Conclusion:

Sustainable graphic design is the most relevant application of controlling the environmental impacts of advertisements. In this study, it has been found in the context of India that graphic designers are aware of environmental problems and their long-term consequences; at the same time, they definitely want to contribute something relative to it at their level. But as Graphic Designer they are unaware of any other effective method other than conveying environmental messages with advertising endorsement in the design. Apart from spreading awareness among consumers, graphic designers can adopt many measures. For this they need to be informed. That

information should have an in-depth sight that also outlines a strategy for building sustainability-oriented graphic designs. For this, a meta-framework of sustainable graphic design needs to be developed. This is the initial blueprint for conceptualizing a meta-framework in the context of sustainable graphic design. The validity of which has only been partially tested. If it succeeds as an application in the graphic design of advertisements it will surely make a positive impression on the environment; such as neutralizing the digital carbon footprint.

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Dyeing of Cotton Fabric with Acrylic Colours

Krishi Sarin & Anjali Agrawal

ABSTRACT

Cotton fabrics are generally dyed with direct dyes, however, the process results in the consumption of a very high amount of water at high temperatures. This not only results in a large amount of effluent leading to serious environmental issues but also destroys the natural texture of the fabric. The preliminary study showed the possibility of the application of acrylic colours on cotton fabric. In this paper, parameters viz. M.L.R., time and temperature were optimized for the application of three primary acrylic colours on cotton fabric using Box and Behnken Design of Experiments. The optimized parameters were found at 60 minutes, 50^0C, and 1:10 MLR. The dyed fabrics had excellent wash fastness. The COD and BOD of the effluent liquor of acrylic colors were found to be considerably less than the effluent liquor of direct dyes indicating that dyeing using acrylic colors is less toxic to the environment as compared to dyeing using direct dyes.

Keywords: - acrylic colors, cotton, fastness, parameters, COD, BOD

1. INTRODUCTION

Direct dyes are used for the dyeing of cotton fabrics, they are soluble organic compounds and exhibit high solubility in water [Mohapatra, N. N. (2016).]. The dyeing process uses large amounts of water at high temperatures which in turn leads to excessive wastage of water. The discharge of such excessive wastewater causes damage to the environment. The resulting discharge of untreated effluents into the water bodies constitutes 80% of the total emissions produced by the textile industry [Wang, D.M. (2016)] which demonstrates high biological oxygen demand (BOD) and chemical oxygen demand (COD) [Setiadi, T., Andriani, Y., & Erlania, M., 2006]. Furthermore, high temperature also destroys the natural texture of fabric (especially delicate fabrics).

Many studies have been undertaken to reduce the problem of effluent [Lellis, B., Fávaro-Polonio, C. Z., Pamphile, J.A., Polonio, J.C. (2019).][L. Pereira, M. Alves (2011)], but still, there seems to be lot of scope in this area. Another solution can be the usage of acrylic colors instead of direct dyes.

Acrylic colours have traditionally been used for painting on fabrics and canvas painting. Acrylic Colour is a fast-drying paint made of pigment suspended in acrylic polymer emulsion. Acrylic colours are water-soluble, but become water-resistant when dry.

Water-based acrylic colours are composed of pigment particles dispersed in an acrylic polymer emulsion. There are three main components in any acrylic paint - pigment, binder and vehicle

- **Pigment -** pigments are granular solids that give paint its color. They have little or no affinity for the surface to which they are applied.

- **Vehicle** – It is that part of the paint that carries the pigment and binder. Water is the vehicle for water-based acrylic and when combined with the binder, it creates a polymer emulsion. Once the water leaves the system via evaporation

or absorption, the paint dries, creating a stable clear polymer film full of trapped coloured pigment particles.

- **Binder** - Binder is the substance that keeps pigment in place after the colour dries. Acrylic colours have acrylic polymer as their binder, and this forms a film after the water has evaporated

Limited literature is available on the dyeing of cotton fabric with acrylic colours which only includes time comparison of dyeing using direct dyes and acrylic colours [Kaur, Amarpreet (2017)]

The preliminary investigation carried out by the researchers showed promising results. Therefore, this present study has been undertaken to optimize the parameters i.e. MLR, time and temperature for the application of primary acrylic colours (red, yellow and blue) on cotton fabric. The dyed samples were also assessed for their wash fastness. The effluent liquor was assessed for its COD and BOD values also.

2. MATERIALS & METHODS

2.1 Materials

100% cotton fabric was used in this study with the specifications in Table 1

Table 1: Specification of cotton fabric

Type of Yarn	100% Cotton
Yarn Count	40s
Percale	215
Warp	113
Weft	102
Weight (GSM)	76 GSM

The fabric was procured from Gupta Cloth Store, Amar Colony Lajpat Nagar, New Delhi.

Primary acrylic fevicryl colours (Crimson Red, Lemon Yellow and Ultramarine Blue) were procured from Need Book Depot, Kailash Colony, New Delhi. Direct dyes (Red, Blue and Yellow) were procured from local dyer shop in Shahpurjat, New Delhi

Dye Bath manufactured by Ramp Impex Pvt Ltd – Model Basti, New Delhi of model series 12 beaker Stainless Steel 500ml was used for dyeing. Non-ionic detergent was used for the pre-treatment of fabric.

2.2 Methods

2.2.1 Pre-treatment of cotton fabric

Pre-bleached cotton fabric was used for the study. However, to remove unwanted impurities and dirt etc from the fabrics before dyeing, the fabric was treated with 1 gpl non-ionic detergent at 90^0C for 15 minutes. The fabric was then washed thoroughly with water and dried.

2.2.2 Dyeing of cotton fabric with acrylic colours

To optimize the conditions of parameters of dyeing, a Box and Behnken Design (BNB) was used. Factors used in the experimental design were MLR, time and temperature. These factor levels were evenly spaced and coded as –1 (low), 0 (central point) and +1 (high) as shown in Table 2.

The selected responses were colour value (*K/S*), L*, a* & b* of dyed samples. Fifteen experiments were carried out on cotton samples with the above-mentioned conditions (Table 3). The analysis of data was carried out using design expert software, version 8.

The module applied a quadratic polynomial equation to analyze the relation of each response with the independent variables, as shown below:

$$Y = b_o + b_1 X_1 + b_2 X_2 + b_3 X_3 + E$$

*(Where bo, b1, b2, b3 are regression coefficients and X1, X2, X3 are factors studied and E is error term

Table 2: Parameters for Box Behnken experiment

Independent Variables	Code	Levels		
		-1	0	+1
Temperature ($^{\circ}$C)	A	25	50	75
M.L.R	B	1:10	1:20	1:30
Time (Minutes)	C	30	45	60

The dyed samples were assessed for their colour uptake values in terms of K/S dependent on time, temperature and MLR. Fifteen experiments carried out on cotton fabric with acrylic colours as per Table 3 below.

Colour Fastness of the dyed samples to washing (change in colour of samples and staining on multifibre) was assessed using ISO 105-C02:1989 – Textiles Standard .

Table 3: Fifteen experiments on cotton fabric for optimizing parameters of dyeing

Run	Factor A: Temp	Factor B: MLR	Factor C: Time
1	1	0	-1
2	1	0	1
3	0	1	-1
4	-1	0	-1
5	0	0	0
6	0	-1	1
7	0	0	0
8	1	-1	0
9	0	0	0
10	0	1	1
11	0	-1	-1
12	1	1	0
13	-1	0	1
14	-1	1	0
15	-1	-1	0

2.2.3 Determination of COD and BOD of the dye liquors

The effluent liquor obtained after dyeing of cotton fabric with direct Dyes and acrylic colours were analysed for COD and BOD using the APHA Test Method.

3. RESULTS AND DISCUSSION

In this study, the parameters viz time, temperature and MLR for the dyeing of cotton fabric with acrylic colours were optimized.

3.1 Optimization of parameters for the dyeing of cotton fabric with acrylic colours

The colour strength of a dyed fabric is usually expressed by its K/S value. In this experiment, optimal parameters which generate the most suited colour strength (K/S) for three different colours – Lemon Yellow, Ultramarine Blue and Crimson Red. Temperature, MLR and Time were identified as the key variables to affect the K/S values and their effect was analysed using the 3D surface plots and regression analysis (dependency on independent variables). After these analyses, the optimal parameters- time, temperature and MLR were selected.

3.1.1 Dyeing with Lemon yellow acrylic colour

The results of fifteen experiments carried out with lemon yellow acrylic colour on cotton fabric have been shown in Table 4.

Table 4: Dyeing of cotton fabric with Lemon Yellow acrylic colour

Std	Run	Factor A: Temp	Factor B: MLR	Factor C: Time	K/S	L*	a*	b*
6	1	1	0	-1	0.54	88.445	-6.124	32.196
8	2	1	0	1	0.43	88.875	-5.805	28.182
10	3	0	1	-1	0.33	88.839	-6.008	23.721
5	4	-1	0	-1	0.2	89.545	-4.472	16.637
15	5	0	0	0	0.69	87.92	-5.9	36.576
11	6	0	-1	1	0.98	85.941	-3.381	43.326
14	7	0	0	0	0.41	88.783	-5.635	27.648
2	8	1	-1	0	1	87.772	-6.064	44.49
13	9	0	0	0	0.61	88.096	-6.052	34.318
12	10	0	1	1	0.39	88.38	-4.81	26.328
9	11	0	-1	-1	0.69	86.657	-7.873	34.501
4	12	1	1	0	0.37	88.844	-5.364	25.41
7	13	-1	0	1	0.29	88.85	-5.162	21.047
3	14	-1	1	0	0.21	89.378	-4.564	16.494
1	15	-1	-1	0	0.36	88.942	-5.48	25.227

The effect of process parameters on K/S has been studied and the following response equation has been observed for the dependent variables:

–   *K/S = 0.51 + 0.16 * Temp – 0.22 * MLR + 0.05 * Time*

p values of MLR and temperature were found to be less than 2% (significant) and whereas the p value for Time was greater than 5% (non-significant). From the analysis of measured responses obtained by the Design Expert software, the quadratic model is

found to be statistically significant for the dependent variable K/S on independent variables Temperature and MLR. The response surface plots representing the K/S values of acrylic colour dyed cotton fabric against the application parameters are shown in Figure 1.
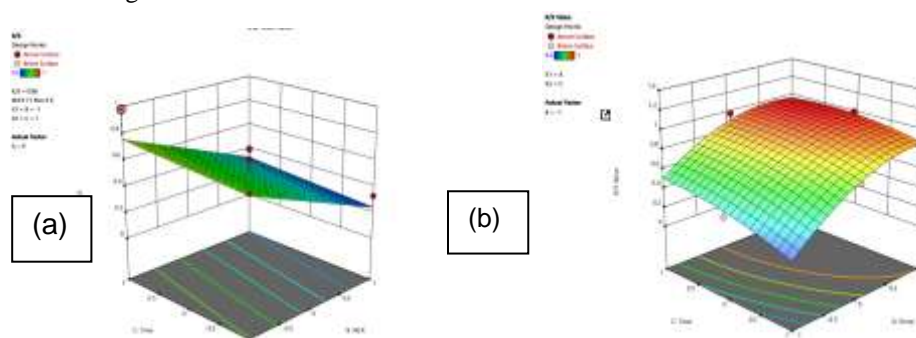
Figure 1: Response surface plots for K/S versus (a) time and MLR at 50^{0}C, and (b) Time and Temperature at 1:10 MLR for Lemon Yellow acrylic colour

It was observed that K/S increased with the rising temperatures, which may be because the kinetic energy of the dye molecules increases at high temperature leading to their movement towards the fabric. But beyond 50$^\square$C, there seems to be some change in the structure of the acrylic colour which led to the patchy dyeing. There was a decline in the K/S with increasing MLR. This may be because acrylic colours are water soluble which decreases their affinity towards the fabric in the presence of large amount of water. It was also observed that K/S increases as time of dyeing increased from 30 minutes to 60 minutes indicating the increased absorption and adsorption of acrylic colour by cotton fabric. Thus, optimum conditions with respect to maximum K/S emerged out to be 60 minutes at 50^{0}C and 1:10 MLR.

3.1.2 Dyeing with Ultramarine Blue acrylic colour

The results of fifteen experiments carried out with ultramarine blue acrylic colour on cotton fabric have been shown in Table 5.

Table 5: Dyeing of cotton fabric with Ultramarine Blue acrylic colour

Std	Run	Factor A: Temp	Factor B: MLR	Factor C: Time	K/S	L*	a*	b*
1	1	-1	-1	0	1.31	66.48	0.075	-41.12
3	2	-1	1	0	0.98	70.174	-0.076	-39.867
14	3	0	0	0	1.96	61.862	-0.078	-44.03
2	4	1	-1	0	4.08	51.205	4.445	-48.021
7	5	-1	0	1	1.01	70.108	-1.232	-39.254
11	6	0	-1	1	1.78	63.061	0.491	-44.242
4	7	1	1	0	2.53	58.44	1.737	-46.573
6	8	1	0	-1	1.98	61.312	1.139	-44.478
12	9	0	1	1	1.14	67.76	-0.384	-38.687
15	10	0	0	0	1.37	65.342	-1.324	-38.136
8	11	1	0	1	3.54	54.3	4.73	-50.803
9	12	0	-1	-1	1.09	68.3	-1.761	-36.515
13	13	0	0	0	1.72	63.111	-0.106	-42.274
5	14	-1	0	-1	1.01	70.108	-1.232	-39.254
10	15	0	1	-1	1.03	68.58	-1.019	-36.114

The effect of process parameters on K/S has been studied and the following response equation has been observed for the dependent variables:

$$– K/S = 1.77 + 0.97 * Temp – 0.32 * MLR + 0.29 * Time$$

p values of temperature was found to be less than 0.1% (significant) and whereas the p value for Time and MLR was greater than 5% (non-significant). From the analysis of measured responses obtained by the Design Expert software, the quadratic model is found to be statistically significant for the dependent variable K/S on independent variables Temperature.

The response surface plots representing the K/S values of acrylic colour dyed cotton fabric against the application parameters are shown in Figure 2

Figure 2: Response surface plots for K/S versus (a) time and MLR at 50^{0}C, and (b) Time and Temperature at 1:10 MLR for Ultramarine Blue acrylic colour
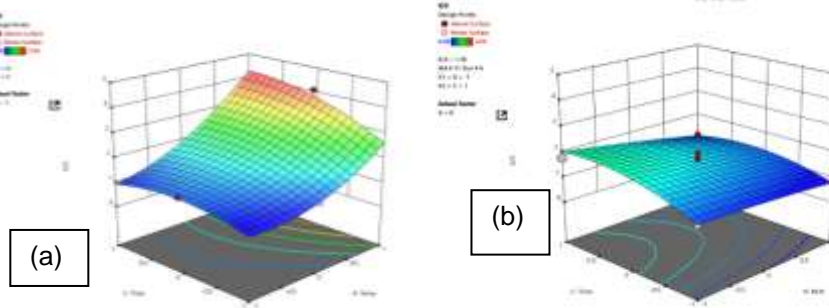
Similar pattern was observed in case of dyeing of cotton fabric with ultramarine blue acrylic colour. Thus, the optimum conditions with respect to maximum K/S emerged out to be 60 minutes at 50^{0}C and 1:10 MLR.

3.1.3 Dyeing of cotton fabric with Crimson Red acrylic colour

The results of fifteen experiments carried out with lemon yellow acrylic colour on cotton fabric has been shown in Table 6

Table 6: Dyeing of cotton fabric with Crimson Red acrylic colour

Std	Run	Factor A: Temp	Factor B: MLR	Factor C: Time	K/S	L*	a*	b*
2	1	1	-1	0	3.58	55.247	45.235	3.381
8	2	1	0	1	4.26	52.853	46.14	5.623
11	3	0	-1	1	2.69	58.386	41.747	-0.852
6	4	1	0	-1	2.86	57.612	42.461	1.546
3	5	-1	1	0	0.53	76.485	23.27	-13.664
15	6	0	0	0	2.17	61.254	39.802	-1.536
13	7	0	0	0	1.34	66.152	33.578	-5.722
9	8	0	-1	-1	1.66	64.051	36.512	-4.944
1	9	-1	-1	0	0.92	70.857	29.462	-10.461
4	10	1	1	0	0.9	70.639	28.767	-8.405
12	11	0	1	1	0.63	74.841	25.646	-11.59
7	12	-1	0	1	0.82	72.241	28.489	-11.367
5	13	-1	0	-1	0.7	73.499	26.422	-11.91
10	14	0	1	-1	0.76	72.860	27.642	-9.893
14	15	0	0	0	1.68	64.365	36.903	-5.277

The effect of process parameters on K/S has been studied and the following response equation has been observed for the dependent variables:

$$- K/S = 1.7 + 1.07 * Temp - 0.75 * MLR + 0.3 * Time$$

p values of temperature and MLR were found to be less than 1% (significant) and whereas the p value for Time was greater than 5% (non-significant). From the analysis of measured responses obtained by the Design Expert software, the quadratic model is found to be statistically significant for the dependent variable K/S on independent variables Temperature and MLR. The response surface plots representing the K/S values of acrylic colour dyed cotton fabric against the application parameters are shown in Figure 3.
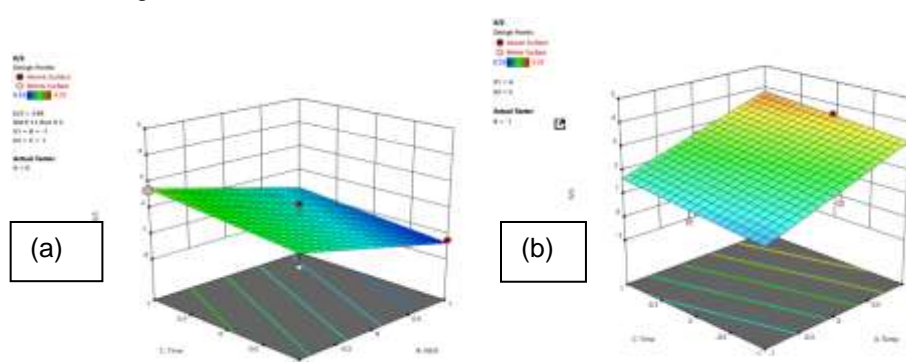
Figure 3: Response surface plots for K/S versus (a) time and MLR at 50dC, and (b) Time and Temperature at 1:10 MLR for Crimson Red acrylic colour

Incase of dyeing of cotton fabric with crimson red acrylic colour also, similar results were also obtained Thus, in this case also, the optimum conditions were found to 60 minutes at 50^0C and 1:10 MLR.

3.2 Colour fastness to washing

The Colour fastness test was conducted on the various samples in test conditions i.e. 50° C for 45 minutes and it was observed that the colour fastness to washing and staining on multifibre were good and ranged between 3-4 for red and yellow colour. This may be attributed to strong bonding between acrylic colours and cotton fabric. While in case of blue colour, the rating was 2- 3 for colour fastness to washing and 3-4 for staining on multifibre. There was no distinctive effect of parameters on the fastness properties. The test results have been shown in Table 7, 8, 9.

Table 7: Colour fastness to Washing of cotton fabric dyed with lemon yellow acrylic colour

Sample Code	Colour fastness to washing (Change in colour of the sample)	Colour fastness to washing (Staining on multifibre)					
		A (Acetate)	C (Cotton)	N (Nylon)	P (Polyester)	A (Acrylic)	W (Wool)
01	4	4	4 4	4	4	4	4
02	4	4	4 4	3/4	4	4	4
03	4	4	4 4	4	4	4	4
04	¾	4	4 4	4	4	4	4
05	4	4	4 4	4	3/4	¾	4
06	¾	4	4 4	4	3/4	¾	4
07	¾	4	4 4	4	4	4	4
08	4	4	4 4	4	4	4	4
09	¾	4	4 4	4	4	4	4
10	4	4	4 4	4	4	4	4
11	4	4	4 4	4	4	4	4
12	4	4	4 4	4	4	4	4
13	4	4	4 4	4	3/4	¾	4
14	4	4	4 4	4	4	4	4
15	4	4	4 4	4	4	4	4

Table 8: Colour fastness to Washing of cotton samples dyed with ultramarine blue acrylic colour

Sample Code	Colour fastness to washing (Change in colour of the sample)	Colour fastness to washing (Staining on multifibre)					
		A (Acetate)	C (Cotton)	N (Nylon)	P (Polyester)	A (Acrylic)	W (Wool)
01	2	4	4 4	4	4	4	3/4
02	2	4	4 4	3	3/4	4	3/4
03	2/3	4	4 4	4	4	4	4
04	2/3	4	4 4	4	4	4	4
05	2/3	4	4 4	3/4	4	4	4
06	2/3	4	3/4 4	4	4	4	4
07	2/3	4	3/4 4	3	3/4	4	3/4
08	2	4	4 4	3/4	4	4	4
09	2/3	4	3/4 4	3	3/4	4	3
10	2/3	4	4 4	3	3/4	4	3
11	2/3	4	4 4	4	3/4	4	3
12	3	4	3/4 4	4	3/4	4	3
13	2/3	4	3/4 4	4	3/4	4	3
14	2/3	4	3/4 4	4	3/4	4	3
15	2/3	4	3/4 4	4	3/4	4	3

Table 9: Colour fastness to Washing of cotton fabrics dyed with crimson red acrylic colour

Sample Code	Colour fastness to washing (Change in colour of the sample)	Colour fastness to washing (Staining on multifibre)					
		A (Acetate)	C (Cotton)	N (Nylon)	P (Polyester)	A (Acrylic)	W (Wool)
01	4	4	4	4	4	¾	4
02	4	4	4 4	4	4	4	4
03	4	4	4 4	4	4	4	4
04	4	4	4 4	4	4	4	4
05	4	4	4 4	4	4	4	4
06	¾	4	3/4 4	4	4	4	4
07	¾	4	3/4 4	4	4	4	4
08	4	4	4 4	4	4	4	4
09	¾	4	4 4	4	4	4	4
10	4	4	4 4	4	4	4	4
11	4	4	4 4	4	4	4	4
12	4	4	4 4	4	3/4	4	4
13	4	4	3/4 4	4	3/4	4	4
14	4	4	3/4 4	4	4	4	4
15	4	4	3/4 4	4	4	4	4

3.3 Assessment of COD and BOD

The chemical oxygen demand (COD) is an indicative measure of the amount of oxygen that can be consumed by reactions in a measured solution. Reactions that have a higher COD value tend to harm the environment more. The Biochemical oxygen demand (BOD) is the amount of dissolved oxygen needed by aerobic biological organisms to break down organic material present in a given water sample at certain temperature over a specific time period. BOD is used to assess the degree of organic pollution of waste water.

COD and BOD Test were conducted to compare the discharged effluent from acrylic and direct Dyes. Figure 4 depicts that the COD/ BOD Levels were lower in the case of using acrylic Dyes as compared to direct dyes especially for yellow and blue colour.

The COD of direct dyes is 40% greater than COD of acrylic colour and BOD of direct dyes is 60% greater than BOD of acrylic colour indicating that the degree of pollution caused by direct dyes is significantly higher than that caused by acrylic colours. There was marginal decrease in the case of COD levels of red acrylic colour, whereas the BOD levels slightly increased as compared to direct red dye. This needs further investigation.
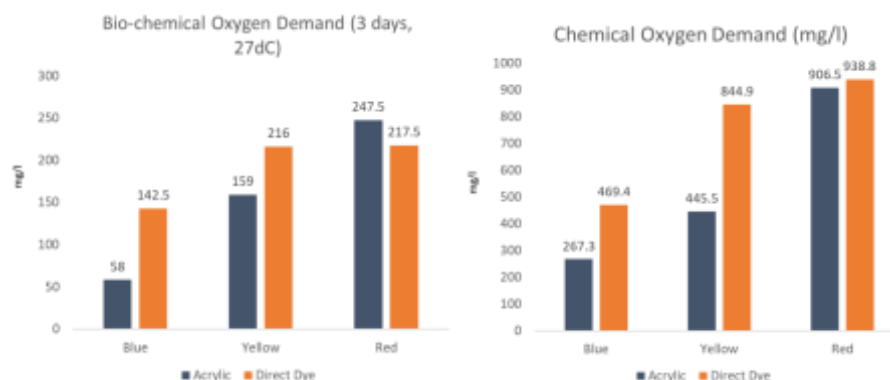
Figure 4: COD and BOD Analysis of Effluent Liquor after Dyeing Using Acrylic Colours and Direct Dyes (Lemon Yellow, Ultramarine Blue and Crimson Red)

Conclusions

Dyeing of cotton fabric with acrylic colour showed promising results and the shades achieved were also very unique. The most optimum parameters for dyeing were 50^0C, MLR: 1:10 at 60 minutes. The assessment of wash fastness also suggested that the dyeing achieved with acrylic colour is durable. Hence, acrylic colours can be used to dye cotton fabric and they can further be experimented to create unique shades. Acrylic dyeing can be good alternative for dyeing to using direct dye as it requires less amount of water and had lower COD & BOD values (less polluting).

List of Figures/ Illustrations:

Figure 1: Surface plot parameters for dyeing – Lemon Yellow Colour

Figure 2: Surface plot parameters for dyeing – Ultramarine Blue Colour

Figure 3: Surface plot parameters for dyeing – Crimson Red Colour

Figure 4: COD and BOD Analysis

List of Tables:

Table 1: Specification of cotton fabric

Table 2: Parameters for Box Behnken experiment

Table 3: Fifteen experiments on cotton fabric for optimizing parameters of dyeing

Table 4: Test Results – Lemon Yellow Colour

Table 5: Test Results – Ultramarine Blue Colour

Table 6: Test Results – Crimson Red Colour

Table 7: Colour fastness to Washing Test - Lemon Yellow Colour

Table 8: Colour fastness to Washing Test – Ultramarine Blue Colour

Table 9: Colour fastness to Washing Test - Crimson Red Colour

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Craft Revival and Product Diversification Through Design Intervention - Punja Durries of Madya Pradesh

Meghna Sinha, Prriyadarshini T & Kavitha Iyer

Abstract-

The present paper focuses on the revival of Punja Dhurries of Madhya Pradesh, India. Design education; financial & marketing support are the backbone framework for successful craft and design projects. (Otto von Busch, Cigdem Kaya Pazarbasi, 2018). Several researchers have worked closely with unique heritage craft for revival and sustenance. One such craft which requires attention from academic research is Punja Dhurries of Sidhi and Rewa district of Madhya Pradesh. Punja Dhurries are gradually gaining importance over carpets. The reason is that, they are easy to maintain and are versatile. However, multiple factors like lack of entrepreneurship, skill development, marketing of products and archiving the techniques and process involved has led to the depletion of this unique craft. With the increase in globalisation hand crafted products have a great opportunity in both domestic and international markets.

Objective and Methodology: It is an exploratory study using mixed method; unstructured in-depth interviews with over 30 Punja dhurrie weavers of Siddhi and Rewa districts of Madhya Pradesh.

Conclusion: Evolution of Punji Dhurrie craft can be seen as a co-creating craft-centred system that places value creation at its core. Product diversification of the existing craft have been developed through workable design intervention, to revitalize a languishing craft and bridging the gap between the consumer and the creator.

India is a country having a diverse culture, which is deeply rooted in its history and traditions. (Dilip Kumar 2013) states that India's epitome lies in the art and craft that is a representation of its culture, tradition and societal values. Traditional textiles witnessing fine craftsmanship, provides exotic range of products. The intricate workmanship of the handlooms gives this segment a unique identity of its own. These craft traditions, perfected through generations of practice are repositories of traditional wisdom of shape, form, technique, colour and in larger context, a way of life. Handloom sector is one of the oldest and the second largest industry next to agriculture providing direct and indirect employment in the country.

(Kawlra 2005) has demonstrated craft as a process to include "holism, identity, and difference in craft" focussing on the cultural and the technical aspects of the craft work for the weaving of Korvai Sari. The research further discusses the role of the Padma Saliyars in weaving auspicious saris.

An empirical research on the role of design in social change proposes including social, cultural along with economic outcomes to establish craft as a heritage. Using empirical examination to analyse design practice in India, the researcher proposes *Intervention*, *Interaction* and *Mediation to construct a meaningful world to bridge the craft and culture through the creators viz the "*active producers of culture".* (Mamidipudi 2018)

In this sense, *Luiz et al also* observed that the designers could cooperate with groups for social innovation thereby contributing to building relationships between craft and design as interdisciplinary and transdisciplinary. The authors argue that in order to develop sustainable solutions for collective and complex design, the intervention has to be collaborative partnership. (Izidio Luiz 2018)

(Ajebush Argaw Shafi 2019) Highlight the relationship between sustainable craft solutions and design sustainability for the renewal of crafts, providing employment and generating income for rural population for their livelihood

(Manzini 2008) theorizes social innovation as changes through simple yet effective sustainable design practices to foster a good dialogue and create integrated solutions capable of dealing with contemporary world challenges. He insists on the role of designer "to improve the world's quality of life quality and not just the aesthetics of products".

The role of craft and design should include market success and thereby empower the community. Otto von Busch, Cigdem Kaya Pazarbasi , 2018 highlight the role of infrastructure for empowerment to lead to capability enhancement. Design education; financial & marketing support is included as a framework for design projects. (Otto von Busch, Cigdem Kaya Pazarbasi, 2018)

Several researchers have worked closely with unique heritage craft for revival and sustenance. One such craft which requires attention from academic research is *Punja Dhurries* of Sidhi and Rewa district of Madhya Pradesh which originated from Punjab and Rajasthan.

According to Heart ForArt-Handcrafted Elegance (n.d), the Punja weaving technique produces the same two-sided Dhurrie design (decorative floor covering) where warp is made from cotton yarn and the weft is made of wool/cotton/jute or hemp yarn. The tensile strength of the cotton yarn in the warp provides a strong foundation for the *Punja Dhurrie*. The Punja Dhurrie Weavers use a claw-like tool called Punja to pack the weft yarn tightly in such a way that the warp yarn is not visible. This technique results in the production of the same design on both sides of the Dhurrie. *Punja Dhurries* are mostly woven in bright colours using numerous geometrical motifs comprising of stripes, check, squares, and pictures of birds, animals, human figurines etc. The designs are varied and are skilfully made to enhance its aesthetic appeal. They are mostly used on floors, beds and divans.

Punja Dhurries are gradually gaining importance over carpets due to its ease in maintenance and versatility. However, with the increase in globalisation, hand crafted products have a great opportunity in both domestic and international markets which this research aims at by understanding artisan's grievances and concerns about the minimal domestic and international market linkage.

It can be called a family business, only if with time as all members significantly contribute and earn their livelihood. However, with the advent of technology in the modern era, art and craft are facing serious problems ranging from manufacturing, marketing, sales and pan-availability for use. The younger generations in absence of assured remuneration, do not prefer to continue the weaving tradition. Hence, the kith and kin of the artisans are migrating from villages to cities in search of a better lifestyle. The sales of the craft products are becoming extremely competitive and

traditional craftspeople often find their crafts languishing due to lack of design inputs to meet ever changing consumer demands.

Other factors contributing to the depletion of craft – *Punja Dhurries*, is the lack of entrepreneurship, skill development, marketing of products and archiving the techniques and process involved.

The present research concentrates on-

- **Restoring the artisan-designer relationship-**- In India, a symbiotic connection between handicraft and design is formed to create contemporary styles. Designers bridge the distance between the consumers and the craftsman by recognizing the aesthetic and socio-cultural needs.

- **Revival of a dying craft-** Blend of traditional skills from artisan and designer's understanding of the consumer needs leads to meet the ever-changing consumer demands retaining the essence of the traditional craft is achieved through cocreational process (Harita Kapur 2014). With the knowledge of the forecast, designers plan two years ahead of the upcoming season in terms of materials (yarns), colour, texture and designs. Coherent creativity between designer and craftsman helps expand the language of art and reach the global market. (reubens 2010) has argued that there is a need for responsible and systematic design intervention that integrates socio-economic and cultural aspects together for the revival of a languishing craft.

- **Creating Product Diversification**- In a highly competitive market, Indian Handicrafts needs to be ahead of its competitors and be up-to-date on current market requirements with regard to trends and ever-changing consumer purchasing preferences.

Research Methodology- This study used mixed methods, unstructured in-depth interviews with over 30 Punja dhurrie weavers of Siddhi and Rewa districts of Madhya Pradesh, and structured questionnaires were administered to the focused group of consumers (age group ranging from 25-50 years). Secondary research data was collected through the study material available through books and research papers.

Data Analysis- The data was analysed qualitatively with the help of the information collected through primary research, and supported with photographs and Punja Dhurrie samples.

Historical Background- Mughal paintings and manuscripts suggest that Dhurries made during the period involved the use of stripes. With the emergence of the British rule, the popularity of European designs like the Victorian floral patterns grew. The Punja Dhurries gave way to more intricate weaving patterns with wider variety of colors. The craft of Punja Dhurrie weaving became most popular in the northern region of India. Artisans in Punjab, Rajasthan and Uttar Pradesh prominently carried out the craft of Punja Dhurrie weaving. The craft practiced in each of these states was bound by the similarity in the motifs and technique and involve the representation of floral motifs in a geometrical manner along with the combination of both geometric and floral motifs.

Comparative Study between Dhurries of Punjab, Rajasthan and Madhya Pradesh-

Punja Dhurries of Punjab	Punja Dhurries of Rajasthan	Punja Dhurries of Madhya Pradesh
Practiced mainly in the Jalandhar, Hoshiarpur, Ropar, Bhatinda and Ludhiana	Also called as Jatpatti Rugs this craft is mostly practiced in villages near Jodhpur and Salawas.	Practiced mainly in villages near Siddhi and Rewa Districts.
Products Made: Bed and Floor Coverings	Products Made: Large floor coverings, animal coverings for winter and cart cover-ups	Products Made: Floor Coverings of different sizes.
Motifs and Color: Vibrant colors with motifs representing daily activities and elements around the weaver	Motifs and Color- Mostly natural and earthy tones with accents of bright colors. Motifs are representation of flora and fauna around the region depending on the weaver.	Motifs and Color- Mixture of bright and earthy hues with motifs representing the flora and fauna of the region in geometrical manner but varies as per consumer demands.
Materials Used-: Natural colored cotton, and wool along with jute and silk	Materials Used: Natural colored wool and cotton along with jute, goat, camel and sheep hair.	Materials Used: Cotton, Wool, Jute and Hemp
This craft is usually practiced by women and girls in Gurudwaras as it is mainly related with the Punjabi concept of dowry.	This craft is practiced by men and women weavers belonging to the Prajapati Caste. The products developed are for personal belongings (household purposes).	This craft is mostly practiced by men belonging to the "Bunai Community". It is their main source of income

Tools and materials used- The type of yarn used for making Punja durries has been categorized on the basis of warp and weft yarn. The warp yarn is in white color and gives the necessary strength to the Dhurries, whereas the weft yarns of various thicknesses and in multicolor, which carries the visual pattern of the *Punja Dhurries*. The weft yarns vary from silk yarns, jute yarns, and wool yarns to cotton yarns.
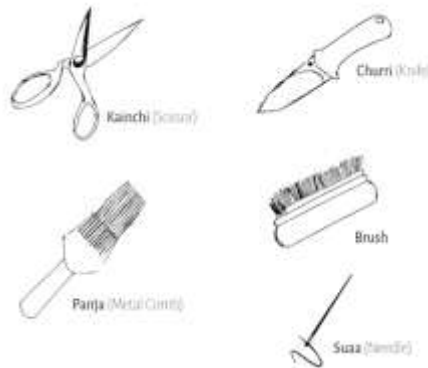
Fig 1- Tools used in making Punja Dhurries

Motif and Color Library- Punja Dhurrie weaving is known for their attractive designs and motifs. Artisans work on many kinds of motifs including geometric designs, leaves and flowers. Traditionally the Punja Dhurrie weavers began with neempati motif which is comprised of 24- petal flower surrounded by leaves. The Sun is considered auspicious as it reflects new life. Sunflower motifs are made purely in yellow colour or as preferred by the buyer. Other commonly used motifs are kangasi (comb), teer (arrow head), tota (parrot), chidia (sparrow) and chaukadi (rhombus). Nowadays, the artisans receive the designs form the consumers and make the motifs accordingly. According to (Kilim n.d.) motifs are derived from symbols that were used in the past to connect and to express ideas.

Over time, some of these signs have fused with myths, acquired hidden meaning and passed into the realm of abstract symbolism.

Fig 2.1 Motifs with the relevance behind it

Fig 2.2 – Common colors used by dhurrie weavers

67

Process of Dhurrie Making-

- **Designing-** Traditionally, weavers use conventional designs based on their region or the design patterns with amendments-based client requirement. They get a design map (Naksha) with the required colour threads attached with it.

Fig 3.1 – Punja dhurries designs and nakshas

- **Raw Material Procurement-** Cotton for warping and wool for weft are the raw materials used for weaving are obtained from local dealers and further processing is done by the weavers. Punja Dhurries are made from four types of materials: cotton, jute, wool and hemp.
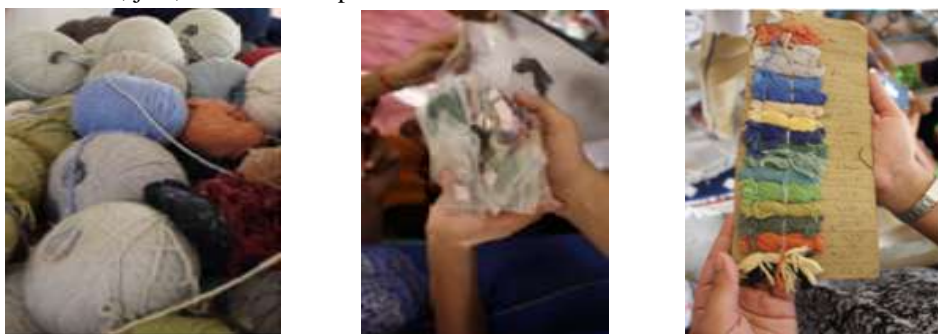
Fig 3.2 – Raw materials procurement

- **Dyeing-** Natural dyes like indigo, manjistha harad, darim (pomegranate) etc. Chemical VAT dyes are used for dyeing the yarns. Variations are more prominent in natural dyes. The weavers get pre dyed yarns from their dealers.

Fig 3.3 – Dyeing of yarns in the desired colors

- **Warping-**The master weaver makes the warps based on the designs and dimensions of the final product. Thread rolls are put on the movable vertical

frame. Other ends of the threads are passed through a small frame grid and then coiled on warp beam according to the designs.

Fig 3.4 – Warping the yarn on the adda (loom)

-

- **Weaving-** The warp will be bounded on the upper and lower beams of the loom. There are two layers of warp that are guided by a flat metallic reel in the middle. One or two weavers sit in the bench in front of the warp and start to weave according to the Naksha (design graph). The first few lines of Punja Dhurries are woven using the weft yarn of the color of the warp yarn i.e white to provide stability to the Dhurrie. While weaving, colored weft yarns are used as per the Naksha and is set firmly with the use of the Panja tool.

Figure 3.5 - Weaving

- *Finishing-* The weavers removes the *Punja Dhurrie* from the loom and gives it to the master weaver for final finishing which is then sent to to the washerman to clear impurities by using water, detergent and potassium permanganate. The master weaver later ties the loose ends of the dhurrie in the form of tassels and rectifies any kind of problems that have occurred during weaving, sends it to a clipper who cuts the protuding threads and blends the knots into the Punja Dhurrie for a smooth finish.

-

Fig 3.6 – Finishing

Problem Areas For The Punja Dhurrie Weavers-

- **Lack of Market Linkage-** The Punja Dhurrie weavers don't get an opportunity to exhibit their work at a bigger scale, like Dilli Haat and Indian International Trade Fair, mainly because it is a less documented and less known craft.

- **Lack of interest by the younger generation-** The retired Punja Dhurrie weavers want to teach the younger generation about the technicalities of the craft but the young millenials want to get proper education and move to big cities in search for better job opportunities.

Design Intervention- Interventions at various levels are proposed for the revival and preservation of *Punja Dhurrie* traditional craft and community. To widen the product range and profit margins of the weavers, a sample of different Dhurries with varied dimensions were developed for different purposes and the design layouts for the same were illustrated with hand sketches and later digitally developed using Adobe Illustrator for the ease of understanding of the final product by the Punja Dhurrie weaver. Design interventions are being made by keeping the essence and originality of the craft intact. Ideas were suggested regarding a few changes in the layouts of the surface designs of *Punja Dhurries*.

Graph 1 – Awareness of the craft Punja dhurrie
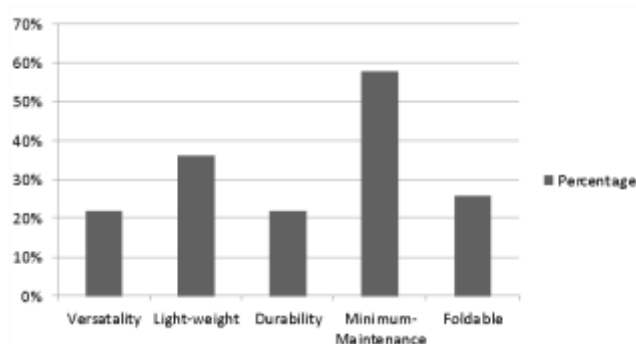
Graph 2 – Appreciated characteristics of the craft

- 56% of the respondents were not aware about the craft, 58% of the respondents were captivated by the minimal maintenance property of *Punja Dhurries*, 25% of respondents were impressed by the light weight nature of the *Punja Dhurrie* and 19% of the respondents were interested by the durability and versatility of *Punja Dhurries*.

- It is also observed that 49% of the respondents were open to the idea of investing in *Punja Dhurries* for various utility purposes other than floor coverings.

Graph 3 – Responses towards using Punja Dhurries other than just floor coverings

Taking the above-mentioned data into consideration, the following design intervention ideas were proposed: -

- **A flexible floor and table coverings that can also be used as playing mats for children and grown-ups-**

a. During the survey respondents were asked about some of the board games that they were aware of. According to the data collected, 60% of them knew about the game Ludo, while 40% of the respondents knew about the game Monopoly and Twister. In fact, 25% of the respondents were interested with the above-mentioned intervention *in Punja Dhurrie*. Digital mock-ups for the same was created using Adobe Illustrator retaining the originality and essence of the craft intact with changes in the layouts and dimensions of *Punja Dhurries*. The dimensions of the *Punja Dhurrie* can be modified depending upon consumers preferences. The four colour pegs used in the game is represented by much smaller Punja Dhurries of 10cmx10cm which can be later used as tea coasters. A dice can be added to complete the set.

Fig-4.1 (a) - A versatile Punja Dhurrie with base layout of the game "Ludo", for floor coverings and table mats.

b. According to the data collected 25% of the responders knew about the game Twister. It is a game played on a large plastic tangle that is spread on the floor. The mat has six columns of large coloured circles on it with alternate shading in each line: red, yellow, green, and blue. A spinner is appended to a square board and is utilized to figure out where the player needs to put their hand or foot. The spinning board is isolated into four named segments: left foot, right foot, left hand,

and right hand. The game advances itself as "the game that tangles you up". Digital mock-ups for the same was created using Adobe Illustrator retaining the originality essence of the craft intact with minor changes in the layouts and dimensions of Punja Dhurries. The dimensions of the Punja Dhurrie can be modified depending upon consumers preferences.

Fig-4.2 (b) – A digital mock-up of a versatile Punja Dhurrie with a base layout of the game 'Twister' that can be used as a life size playing mats

*   **Roll-Up Curtains-** According to the primary data analysis, 25% of respondents were impressed by the lightweight property of Punji Dhurrie and 25 % of them were intrigued by the foldable characteristic of the same. Inspired by the concept of Roll-up French Door Curtains and keeping these statistics in mind, digital mock-up was created using Adobe Illustrator, retaining aesthetics and essence of the craft intact with minor changes in the layouts and dimensions.

Fig-5.1 – A digital mock-up for door and window curtains

Fig-5.2 – Mock-up of the design intervention

Conclusion-

The traditional crafts are still changing in India, and the debate on what must the craft community yield to need of a consumerist society, or retain its authenticity continues an open ended one. From the possible design intervention alluded to above, it is noted that the evolution of Punji *Dhurrie* craft can be seen as a co-creating craft-centred system that places value creation at its core. The key factors to be considered in co-creating craft empowerment system are craftsmanship, innovation, technology and knowledge exchange. A wide range of utility-based user-friendly product diversification as small as coasters to a mid-range of table runners, French window curtains to a bigger range of board games as floor coverings is proposed for the sustenance of versatile *Punja Dhurrie* craft. Digital documentation has been completed to preserve the authenticity of the craft. In conclusion this will not only help in revival of the craft but also enhance the socio-economic status of the *Punja Dhurrie* weavers.

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Indian Folk-Art Forms: Towards a Challenging (Typography) Design Paradigm

Prajakta Parvatikar

Abstract

India has a vast cultural legacy tied with its traditional Arts and Craft, right from the folk arts and handicrafts. This heritage has over the centuries been passed on from generations and is determined to endure in its original best. As a matter of fact, they have struggled to survive in the latter half of the twentieth century. But, designers, entrepreneurs, artisans, and the likes are trying their levels best to revive this forgotten glory. Globalization, mass production, technology development, and more importantly understanding the significant value of our rich cultural heritage are emerging areas that worry the researcher in reference to design education. On one side, going back to one's root is trending with loads of social media content tutoring various Indian Folk-Art forms. Whereas on the other, one sees these art forms losing their authenticity. At least the audiences are now aware of their tradition, thanks to innumerable objects to own ranging from paintings, handicrafts, jewelry to even furnishing and interiors. The genuine need now is to make design students aware of more sensitive explorations.

As responsible educator, exposing talented millennials to the authenticity of Indian tradition, is the key purpose of developing a Lettering and Typography Design Assignment. Traditional wall-painting styles namely Mandana, Jhoti and Warli, which looked very similar, yet were distinctly apart were chosen as a reference. This Indian Folk-Art form inspired assignment, through meticulous research and typography explorations, focused on the global exposure and simultaneously maintained its authentic rustic Indian identity. Undergraduate design students explored through strategy experiments, defying the conventional ethics of lettering design and were encouraged towards executing heterodox, iconoclastic lettering and typography design solutions. This paper discusses the task as a case study to promote importance of interlinking contemporary Indian Folk-Art form heritage in reference to the changing paradigms. The paper showcases satisfying results acquired by students through in-depth discussions and timely guidance. The paper concludes with an emphasis on the need for such educative tools so as to inspire design millennials to respect their cultural inheritance. It establishes an opinion that, future designers with such projects in their portfolio could encourage local artisans sustain the globalization culture.

Keywords: Indian Folk-art, Indian Script, Typography, Lettering Design, Artisan, Culture

Background

India has a vast cultural legacy tied with its traditional Arts and Craft, right from the folk arts and handicrafts to textiles, folk dances or instruments. This heritage has over the centuries been passed on from generations and is determined to endure in its original best. Ironically, the folk arts have struggled to survive in the latter half of the twentieth century. But, designers, entrepreneurs, artisans and the likes are trying their level best to revive this forgotten glory. With the influx due to globalization, mass production, and of course technological development, understanding the significant value of our rich cultural heritage has primarily become an emerging area in reference to design education.

Where on one side, going back to their roots is trending with loads of social media content tutoring various Indian Folk-art forms; on the other side, one sees these same art forms losing their authenticity. On a positive note, though, at least the audiences are now aware of their tradition, thanks to innumerable objects to own ranging from paintings, handicrafts, jewelry to even furnishing and interiors. Genuine need today, I feel as a responsible educator, is to make young creative minds (design students) aware of further sensitive explorations. Thus, exposing the talented bunch of millennials to the authenticity of Indian tradition, formed the crux of the key purpose of developing a Lettering and Typography Design project.

Academic Inspiration

The B.F.A. (Applied Art) Degree course curriculum stresses imparting industry/profession need-based education. Several live or ongoing projects that aid students to understand the current trends better are encouraged in the institute. Deliberating on the thought that, retaining the authenticity of Indian folk-art forms is essential to keep the tradition intact, the researcher planned a meticulous design project that could use few of these forms as a design primitive. Also, these undergraduate students get to explore one specialized elective subject in their pre-final year. Lettering and Typography is one of the areas of specialization, the researcher challenged students to explore painting styles through scripts. A challenge thus was set among the Lettering and Typography elective student group to learn, study, explore and design one Display font and a fresh typographic design solution of an Indian folk-art form not known to them.

To make the task more interesting, art forms which looked very similar yet different, were shortlisted encompassing different parts of India.

Indian Folk-Art Form as a Design Primitive

Indian Folk and Tribal Art expresses a lot about its glorious tradition. Folk-Art has been produced from an indigenous culture with its distinct panache and design. The Art forms, simple and colorful, with the primary purpose of being functional and not just decorative; are maintained with its rustic feel and aesthetic values. Most Indian regions have Folk-Art/Tribal Art forms where mythology, legends of deities and local heroes are created as kaleidoscopic image of glorious heritage. These Art forms are seen either on walls as paintings or on floors as adornments outside houses (rangoli). The styles are simple, mostly linear, with hardly an understanding of perspective or composition. But the forms are bold enough to clarify the stories being told, aplenty with morals. And, these Art forms have been passed on from one peer group to the other, thus developing a base for traditional values.

Mandana Folk-Art Form, Rajasthan, India

Figure 1: Indian Folk-Art Form- Mandana from Rajasthan. Source: Google Images

Mandana paintings are wall and floor paintings of Rajasthan, India. They are drawn to protect home, welcome gods and as a mark of celebration. Skilled women from the Meena community of Hadoti area possessed skills with perfect symmetry. The ground is prepared with cow dung mixed with rati, a local clay, and red ochre (geru). Lime or chalk powder is used for making the motifs with rustic tools like a piece of cotton, tuft of hair, or rudimentary brush made out of date sticks.

Jhoti Folk-Art Form, Odisha, India

Figure 2: Indian Folk-Art Form- Jhoti from Odisha. Source: Google Images

Jhoti, also called as Chita are traditional floor and wall art from Odisha, India. They were highly symbolic and meaningful as they were drawn not only to decorate houses, but also to establish a relationship between the mystical and the material. Jhoti involves line art using the traditional white coloured, semi liquid paste of rice or pithau against a red ochre background. Fingers were used as brushes, with intricate and beautiful floral designs like the lotus, or elements from Pattachitra like elephants. Small footmarks of goddess Lakshmi are seen in every Jhoti, as it is considered as a means to attract goddess Lakshmi, hence prosperity into homes.

Warli Folk-Art Form, Maharashtra, India

Figure 3: Indian Folk-Art Form- Mandana from Rajasthan. Source: Google Images

Traditionally a wall painting from Maharashtra, India, Warli Painting has found its way to various surfaces today. Traditional Warli painting never used religious iconography like figures of gods and/or religious symbols. It represented nature as a god and emoted human dependence and association with nature. Warli paintings depict a sense of uniformity in people and always highlighted a close social relationship within community members. Elements like trees, animals, events, social gatherings and formations of humans in real life scenarios and situations become a visual narration of traditional stories. A typical Warli painting can be identified by its brown coloured (red ochre or geru) background application, figures/elements drawn with brush or stick with rice paste (white coloured) in basic linear graphic vocabulary like circles, triangles, squares & lines.

Typography as a Design Tool

Typography, an ancient craft, a symbolic personification of language with a mix of text and images, make dull language alive. The typography world provides opportunities to intermingle sundry cultures. It mixes language with characters from different cultures, and religions and creates a new stage of amazement. Typography strongly affects the reader's reaction to a story, document or text. Appropriate, sensitive, and reliable use of preferred type or font is as much significant as images or color used in forming a graphic image. As a design tool, Typography fulfills the sole purpose of being more practical or usable than being just aesthetic. It makes written words more appealing and legible to read. It is a tool, for communication. It is the typographer's care that makes letters connect with the literary culture. Words are very significant as pictorial components, and types/fonts assist as a graphic design tool to deliver the message. When used properly, Typography has the ability to convey sensitivity to the audience (Silvertant 2017). Typography is an important part of Communication Design as Grammar, Text Hierarchy, Placement, Readability, User experience, Cognition of Visual Language, Advertising, Design, and most important Information Design is tackled (Gruendler 2010). Learning the selection of typefaces is not the only criteria to do creative Typography, but learning to design true communication makes a complete Typographer.

A typographer needs the basic know-how of typographic form and applications (anatomy, construction, tool, medium), complexities of set text (leading, kerning, and tracking), conventions, and expanding perception. Typographer also needs to know all the typography rules to break them, experiment beyond, and explore with communication through visual language, hierarchy, rhythm, and motion.
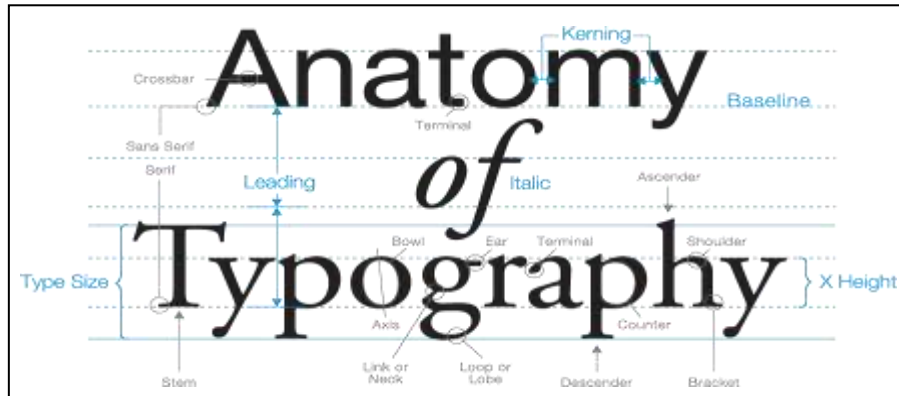
Figure 4: Anatomy of Roman Typography (Terms Used in Typography for glyphs or Typefaces)

Source: Google Images

For the project, students were briefed and taught the basic font construction rules of both Latin and Devanagari scripts. They learnt the x-heights, ascenders, descenders, ligatures and other Latin typography anatomy, as well as the shiro-rekha, skanda-rekha, nabhi-rekha, janu-rekha and pada-rekha terminologies of the Devanagari script.
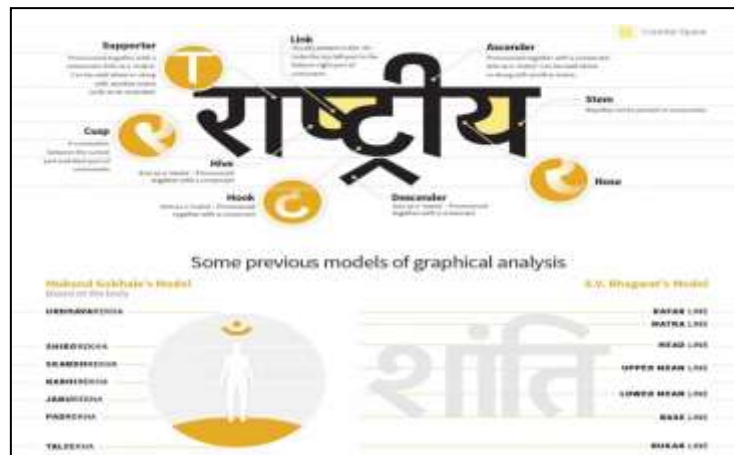
Figure 5: Introduction to Devanagari (Graphic Analysis and Terms Used for glyphs)

Source: Evolutionary History of Devanagari Typeface, Gohad, D'source (2011)

Students were thus exposed to the vowels, consonants, numerals, jodakshara (conjuncts), punctuation marks and other glyphs of both the scripts.

Research Methodology

Qualitative research was based on a project design, planned and executed meticulously to determine whether the Indian Folk-Art forms create an impact on design students' thinking.

Purpose and Objective

Primary purpose of the project meant students to learn one authentic Indian Folk-art form.

The project intended that student designs one Display font in either Latin or Devanagari script based on the style they learn.

The objective was to make students come up with at least one creative application using their designed font which one wouldn't have otherwise seen in the retail market.

Project Planning: Process, Design, Context, and Task

This Indian Folk-art form inspired project, through thorough research and typography explorations, focused on the global exposure and simultaneously maintained its authentic rustic Indian identity. The project was divided into stages involving:

a. Researching, exploring and studying the chosen Indian Folk-art form.
b. Practicing the forms, technique and background to design a novel painting.
c. Choosing one/two design primitive/s from the new painting and designing one single display letterform in Devanagari or Latin script.
d. Constructing a grid based on the letterform designed and recreating remaining letters, including all the vowels, consonants, numerals and punctuation marks.
e. Checking the readability by composing a word (preferably the name of the Art form).
f. Composing all the letterforms in an interesting poster design.
g. Information Poster design which introduced the Indian Folk-art form to audiences.
h. Media application of the designed letterforms.

Task A asked the students to choose and research any one of the eleven artforms provided to them in detail thereby learning its style, technique, material, context, surface and application. Three of the Typography design projects discussed here as a case study are Mandana from Rajasthan, Jhoti from Odisha and Warli from Maharashtra. All these three Folk-art forms have similarities on a superficial level- in the 'geru' background colour, single-color white linear execution, and similar forms or elements in their paintings. In spite of these close similarities, all the three Folk-art forms are distinctly apart when studied further in detail.

Task B required students to prepare one painting on their own using all the information they had gathered in Task A. They had to practice motifs, borders, the line simplicity and other aspects of the chosen style. Students made a composition of their own by not copying from any ready reference.

Task C was designed where every student picked up primitive/s from their already chosen artform and combine it with help of grid to design new letters. Since, the stress was given on maintaining authenticity of the form, most of the students preferred hand-lettering instead of technical font designing. The undergraduate typography students thus explored each artform through strategic experiments, defying all the conventional ethics of lettering design thereby executing heterodox, iconoclastic lettering and typography design solutions.

Figure 6: Few Initial Scribbles from Task C
Source: Harshada Chindarkar, Vaidehi Gahane (2019)

Task D encouraged the students to now explore possibilities of applying the designed font into some media for communication. So, students troubleshooted from simpler media like posters and digital banners, to 3D media like jewelry and accessories. Some went thinking out-of-the-box and came up with interesting playing card designs, or even an entire interior design plan. For both task C and D, students were encouraged to go beyond the regular rule book. They were allowed to explore various possibilities of designing the letterform using design primitive (in this case, any one FolkArt form). They were inspired to develop their own grid based on one letterform designed, initially and were asked to experiment with overall form as the task was to design a Display Font.

The final project was displayed in an exhibition. All the stages and tasks were arranged in a way where audiences could appreciate the creative skills and craftsmanship of students.

The following figures showcase three final projects executed by students.

Figure 7: Task B, C, D- Mandana Folk-Art Form of Rajasthan, India.
Source: Harshada Chindarkar, Rachana Sansad College of Applied Art & Craft,
Third Year B.F.A. Applied Art, (2019)

Figure 8: Task B, C, D- Jhoti Folk-Art Form of Odisha, India.
Source: Kshitij Rane, Rachana Sansad College of Applied Art & Craft, Third Year
B.F.A. Applied Art, (2019)

Figure 9: Task B, C, D- Warli Folk-Art Form of Maharashtra, India.
Source: Vaidehi Gahane, Rachana Sansad College of Applied Art & Craft, Third Year
B.F.A. Applied Art, (2019)

Observation

The project was applauded, appreciated and encouraged by students and professionals.

Since this project was conducted before the current lockdown conditions, students could connect with the local artisan, wherever possible. Meeting them in person made the students realize the painstaking efforts taken by these artisans in today's techno-world.

It was a lengthy project which took over 45 days with about 18 hours each day at a stretch to complete. But at the end, each student was deeply involved in their chosen artform. Students executed the tasks wholeheartedly and sincerely with every challenge that came their way.

Research and creating their own paintings, i.e.: Task A and B, the students managed with much ease; as compared to designing letterforms with a specific design primitive and modern applications. The latter, i.e.: Task C and D was where they had to think laterally and come up with unique creative solutions.

Conclusion

The satisfying results acquired by students through in-depth discussions and timely guidance proved to create interest amongst each one of them to pursue this ahead in their careers at least once.

This project thus, as a case study promotes the importance of interlinking contemporary Indian Folk-art form heritage in reference to the changing paradigms.

As an educator, the researcher finds a need for such educative tools so as to inspire design millennials to respect their cultural inheritance.

The researcher also senses and proposes that with such kinds of projects in their portfolio, the future generation of designers, or entrepreneurs could definitely encourage some local artisans sustain the globalization culture.

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Identification of Effective Factors for Environmental Digital Advertising[*]

Manish Arora & Peeyush Kumar Gupta

Abstract:

Half of the world's population is online and the Internet is being consumed in abundance. In which due to the consumption of huge amount of energy, it has a negative impact on the environment. This became a serious problem. Talking in the context of advertisements, the increasing dependence on digital or online is increasing the expenditure done in it rapidly. Therefore, understanding the seriousness of the environmental impacts caused by digital or online advertisements, the study is relevant on how these digital advertisements are dangerous and if they have negative effects, then what measures can be taken. It is for this purpose that this study has been done, the results of which have indicated that digital advertising has a negative impact on the environment in three ways; Energy consumption in making environmental decisions, motivating to consume more urgently and without consideration, and in the online broadcast of advertisements. As a measure of this, the main idea was to launch the file format used for the information to be transmitted in a new or updated version.

Keywords: Digital Advertising, Carbon Footprint, Digital Carbon Emission

Introduction:

We are all online, but it would be better to say that almost half of the whole world is online and spends a good amount of time online every day. That is why this online system was chosen for the broadcast of advertisements, which is prevalent in the present time in words like digital advertising or marketing. In a developing country like India, almost half the population is a frequent user of the Internet; there are 696.77 million Indian Internet users as of Statstica, 2020. All these Indian users use the Internet to a large extent; which clearly means that they spend a lot of time on the internet every day. Currently, it provides the easiest and most relevant opportunity to advertise any product or service. The specialty of online or digital platform is that communication becomes effective here as well as there is scope for immediate action. That is why it is the desire of almost every marketer to have all the necessary information about their product or service (especially the one that is effective in making purchase decisions) constantly available here.

As it is known that the main basis of environmental problems is carbon emissions and digital revolution is considered to be the solution to this problem but in reality digital consumption also emits carbon. Rather, the emissions are much higher than expected; this has exceeded the emissions from the aviation industry. This is the reason why it has now come to the fore as such a problem, for which finding a solution as soon as possible has become an essential subject. At Digital Carbon Emissions, it has been found that video streaming is an important factor and the popular and most popular medium for online advertising is video advertising. That's why the role of online advertising in overall digital carbon emissions is a major focus. Since the mainstay of

digital carbon emissions is energy consumption; and the transmission of information on digital platforms depends on data transmission, which requires a lot of energy and the more energy consumed, the more carbon emissions.

Renewable energy has been considered as the most effective step to solve this, but the problem is that what can be the option for developing or underdeveloped countries who do not have any source of renewable energy or production is less. If energy consumption is the problem then it is possible that the best solution would be to consume the least energy. So, in the context of the construct of advertisements, it will be necessary that their design and broadcast should be in such a way that it consumes the least amount of energy.

It is a fact that the dependence on advertisements for all marketing processes is not going to decrease; rather, its frequency will increase in the coming time, so instead of reducing the transmission of online advertisements to work on carbon emissions, it should be considered for those effective taxes for the construction that consumes energy. In this context, the question arises that how the advertisements should be designed which consumes least energy, that is, what are the factors that should be kept in mind while creating advertisements. This research has been done in response to this question and with same objective. Since digital advertisements are mainly being transmitted in the form of user manuals, leaflets, posters etc., then there is also a possibility of taking prints of it by any internet user or related marketing executive, then it is also necessary to understand the point of view of printing. Also another important fact is that advertising is a medium of communication and somewhere it motivates the purchase decision by the consumer; the decision of the consumer must also be considered from the environmental point of view. Therefore in this research paper has also outline and environmental decisions and printing.

Literature Review:

The growth of internet advertising is irresistible. The market size of internet advertising was estimated about $378.16 billion (Statista) for year 2020, more than half of total global advertising spending (The mint, 2019) and it is expected $645.8 billion (Statista) of spending on online advertising for year 2024. This enormous expansion has been occurred due to the spread of the Internet's wider bandwidth. Of these, the percentage of spend on advertisements exclusively through streaming is the highest. These are the ones that appear at the first, middle or end of the video content on the streaming Internet (YouTube, 2016). Spending on these streaming ads registered an increase of 42 percent in 2016 compared to the previous two years. Every person in the world now spends a lot of time watching videos on the internet. As such, only India has the highest 7.1 percent video views of the world on the Internet. On an average, every Indian watches five hours and 16 minutes of video content every day on the Internet (businesstoday.in). An average of 5 minutes per hour of unskipable advertising is seen on YouTube. In this sense, every Indian sees at least 25 minutes of advertisements online every day. 25 minutes a day can be considered a good amount of time for video streaming. In a billion population, this time is too much. Therefore, the contribution of internet or digital advertising in digital carbon emissions cannot be ignored.

According to Pärssinen, M. et al (2018) the ecosystem of digital or online advertisements is based on the Internet, and this Internet is the only source for all the services offered online. Therefore, it is a primary and essential aspect to analyze the

energy consumption and its carbon footprint caused by Internet use. According to a study by Pärssinen, M. et al (2018), online advertisements consumed 20–282 TWh of energy in 2016. In that year, a total of 791 to 1334 TWh of energy was consumed in all the mediums of the Internet. With extrapolated 2016 input factor values without uncertainties, online advertising consumed 106 TWh of energy and the infrastructure 1059 TWh. With the emission factor of 0.5656 kg CO2e/kWh, researchers have calculated the carbon emissions of online advertising, and found it produces 60 Mt CO2e (between 12 and 159 Mt of CO2e when considering uncertainty). The share of fraudulent online advertising traffic was 13.87 Mt of CO2e emissions (between 2.65 and 36.78 Mt of CO2e when considering uncertainty).

In the year 2020 total 696.77 million (Statista) Indian populations were internet users. If we multiply the number of population by every day spending hours on internet for video streaming than it is about 3670 million hour par day video streaming by India and in which 305 million hours are streamed for watching internet advertisings per day in India. As per Shift Project about 0.42 kilogram carbon dioxide equivalent emit by every hour video streaming so India is emitting about 1541 million kilogram carbon dioxide equivalent every day. If calculating specifically carbon emission by digital advertising (video) then the amount is 128 million kilogram carbon dioxide equivalent: and its huge amount of carbon emission. So that it is very urgent to address about digital carbon emission through digital advertising to curb the environmental deterioration.

The most important thing during the design of ads is its graphic design. It is already known that less carbon will be emitted than the electricity consumption itself, so the construction of the graphic should be done mainly on the basis of such points which can fulfill the desired objectives. Sustainable graphic design is currently the most suitable option for this. According to designer Rafiq Elmansy (2017), founder of designorate.com, there are 6 key facts to be included in the Sustainable Graphic Design checklist; First, to find alternatives for the production and transmission of advertisements that account for a lower carbon footprint. Second, since printing cannot be avoided, the use of recyclable paper and ink materials must be ensured. Thirdly, bleed should be avoided in the design and if it is there should not be any color fill. Fourth, the use of non VOC (Volatile Organic Compound) inks. Fifth print on non-chlorinated paper and sixth to propose a positive environmental choice to the client.

Methodology:

Carrying out any study in the context of digital carbon emissions is a challenge in itself because it is complex to measure emissions. That is why it may not be appropriate to present any one theory in research. Since it is certain that digital carbon emissions are a relevant problem, measures should be considered to reduce the amount of digital carbon footprint in the context of advertising. And in this initial sequence it is more necessary to find out those possible factors that can reduce the amount of emissions. Therefore, for this research, it has been proposed to do a descriptive analysis of the factors given earlier by different researchers.

For this analysis, some questions were scored on a 5 point likert-scale and some were asked as a checklist. A total of 212 responses were collected for this. Two main and essential criteria have been fixed for the respondents.

     1. They should be related to the advertising profession in any way.

2. Be well acquainted with advertising construction and environmental facts.

All responses have been selected for interpretation of environmental decisions. These all respondents belong to pan India. 148 (69.8%) respondents were male and 62 (29.2%) were female. 73.6% respondents belong to young age group between 20 and 30 years. Half of total respondents were postgraduate or above in advertising and its related subjects and 92.5% respondents have at least graduation. 43.4% were researcher/author/ scholar, 12.3% respondents belong to advertising/ marketing agency, 21.7% respondents work as freelancer or self practitioner and rest 22.6% respondents were students of advertising and graphic design.

Research Findings:

The research has three groups that have been studied; first is about the environmental decisions means how advertising put impact on consumers for taking environmental decisions. Second, how digital advertising is responsible for environmental degradation and finally, what can be the effective measure that can be initiated to curb environmental deterioration through digital carbon emissions. Advertising doe's mass communication (Dyer, 2008) and it made impact on purchasing decisions (Comanor, 1974). Similarly in case of making environmental decisions on what product should be purchased, how to consume and what to do after consumption also being communicated through advertising (John S. Hill & William L. James, 1990 Kärnä, J., Juslin, H., Ahonen, V., & Hansen, E. 2001) so the significance of advertising can't be ignored while discussing environmental impact.

Digital Advertising Influence the Environmental Decisions

Since the mode advertising being transforming to digital and/ or online so the same impact of advertising through digital platform also needs analysis but from the lookout of advertising and marketing professionals. Into the response of above argument the findings states 90.6% respondents agreed on the existence of environmental degradation. 91.4% respondents take this as a serious problem and 90.6% expressed that human actions are responsible for this condition and immediate action should be taken. 88.7% respondents believe that advertisers and marketers could influence the people for making positive environmental decisions and they should increase their efforts into this. 84.0% of the respondents believe that advertising also inspires consumers to make decisions that are responsible for this condition of the environment. 87.6% of respondents feel better when their clients and their product make a positive impact on the environment. 91.5% of respondents feel themselves working on a project when their project makes a positive impact on the environment. This descriptive data suggests that approximately 90% of advertising and marketing professionals are interested in producing and broadcasting advertisements that have a positive impact on the environment.

Digital Advertising is Responsible for Environmental Deterioration

Now the important question is how these professionals blame digital marketing for the damage to the environment. To answer this, 7 statements set out earlier were presented to the respondents (advertising and marketing professionals) (table no. 1).

Table No. 1: How digital advertising is responsible for environmental deterioration

	Statements	n	%
1.	It influence for immediate and unconscious consumption without informing the consumers about ecological consequences		138 (65%)
2.	Ads do not communicate whole truth about the behavior that is responsible for affecting the environment		177 (83.5%)
3.	By influencing consumption without showing the impact caused or supporting measures that would mitigate or reduce the impact		112 (52.8%)
4.	Overconsumption of Energy on digital communication		165 (77.8%)
5.	Unsustainable advertising reproduction process		152 (71.6%)
6.	Irresponsible design method adoption for advertising		149 (70.3%)
7.	High rate in the energy consumption on digital contents		143 (67.4%)

The results can be divided into two major parts, first about the intention and second about energy consumption. Cumulatively, most of respondents believe that the narration of advertising message for communication is not exact communication in the context of environmental consequences. Professionals who practice advertising have the highest priority (83.5%) on whether or not advertisements hide truths that openly reveal the environmental consequences of product use. On the other hand, most professionals (65%) believe that the marketer's implication remains on immediate and unintentional consumption by consumers through advertisements, without informing consumers about the environmental consequences. More than half of professionals (52.8%) agree with the fact that advertising on digital affects consumption by hiding facts such as mitigating effects on the environment or supportive measures that reduce environmental damage.

The second main part was on energy consumption, two implications emerged from its results, first that digital advertisements consume more energy than expected and secondly the design of advertising was held irresponsible.

Identification of Digital Advertising Design Measure:

Four statements were presented to the respondents, which they had to select on the basis of preference (table no. 2). All these statements were set out in advance as a measure to reduce carbon emissions from digital advertising. Since digital advertisements that are in the form of images or websites containing related information such as user manuals are likely to be printed, paper consumption was also included as a measure. In the results it was found that 60.8% of the respondents consider paper consumption as an important factor. Meaning it can be a right solution to give preference to the use of recycled paper or at least paper. Response was also received regarding the colors used in the design of both print and digital

advertisements. 69.3% of advertising and marketing professionals believe that electricity consumption can also be worked out through proper use of colors. The design reproduction process that encompasses all stages of advertising such as prepress, printing, logistics and uploading-transmission (in the digital context); Respondents have given relatively less preference (45.3%) in terms of related measures.

Table No. 2: Effective Measure for Carbon footprint through Digital Advertising

	Statements	n	%
1.	Paper consumption for digital design for advertising.	129 (60.8%)	
2.	Color Application in the design for both print and digital platform.	147 (69.3%)	
3.	Introducing the design reproduction process control.	96 (45.3%)	
4.	Need of updates and/ or new LITE version and/ or file format for digital advertising for low energy consumption rate.	179 (84.4%)	

Information communication technology is changing rapidly. This is its development in a way, which is happening continuously on the basis of urgency. Out of this, updates are major in software or related things. Since, every information transmitted on digital is in some format such as jpeg or png for images, then the response related to the launch or update of any new or relatively light version of them was recorded. In the context of the measures presented in this regard, the highest preference (84.4%) was given by the respondents. Which signifies that the contribution of information communication technology is also important in the efforts of advertising professionals to reduce the digital carbon footprint.

Conclusion & Limitation:

Digital carbon footprint is a problem which is worrying because the main source of digital carbon footprint is electricity consumption, which will increase in future. And the rapid development in technology shows that the dependence on digital and online will also increase. At the same time, economic development is also necessary for which marketing is necessary and the main assistant of marketing is advertising. Ultimately, it is also natural for advertisements to be digital or online in the future, so it should be necessary to identify such measures which can reduce the carbon emissions or environmental impacts of digital or online advertisements. For this purpose, the structure of this research paper was done to cover those effective factors. How digital advertising negatively affects the environment was analyzed before measures were identified. The measures were then pre-determined and responses were taken from advertising and marketing professionals about which factor would be more effective as a measure. Although all the analysis is descriptive, there is still preliminary research regarding the design of advertisements which has to be studied in more depth and detail in future.

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Islamic pattern designs: transformation from handmade architectural designs to machine-made interiors

Neha Geeta Verma & Nikhil N. Sharma

ABSTRACT

In the globalized world, interior design is committed to providing functionality and enhancing the positive experience of the space. For this purpose, several old crafts and art forms have been re-adopted, wherein Islamic patterns appeared as widely used as a design language in various decorative elements in contemporary architecture and interiors. This study intends to examine the adaptation and application of Islamic patterns in modern interior design, planning to track the application of Islamic patterns in interior products by leading modern brands and designers. The paper looks into many design aspects like production, material, technology, artistry, etc. This paper attempts to observe the shift in the design language that occurred during the transformational period leading to contemporary interior designs.

KEYWORDS: Islamic patterns, modern interior, material, technology, contemporary software designs.

Patterns play a vital role in the enhancement and adornment of any space. Patterns are deliberated repetition or reproduction of a basic unit (the motif) to form a sizeable orderly arrangement (GITURA, 2002). Different authors provide diverse but related definitions of patterns. Hornby, defines the pattern as "The traditional way things happen or are done. It can be a regular arrangement of lines, shapes, and colors as a design on material e g. carpets (Hornby, 2000)." This can be interpreted as notable regularity in the natural and manmade world that gets repeated predictably. However, the application of patterns in most other parts of the world is deliberate and clearly understood to carry cultural, religious, and social meaning.

Patterns are a significant part of Islamic art. In the context of Islamic art, the endless repetitive patterns reflect substantially extensible designs that have been explained and interpreted as visual demonstrations of Gods singleness and existence universally. They symbolize "unity in multiplicity" and "multiplicity in unity" (Kassim & Taib, 2012). When organized geometrically with the sequence, such two-dimensional elements are not just considered a geometric shape but also comprised of inscriptions and flora patterns arranged according to the strict geometrical rules. These designs are also known as the "arabesque", this word describes the various forms of two-dimensional geometric designs (Kassim & Taib, 2012). Decorative features as the system often use geometric patterns and species of animal plants are not in the context of Islamic architecture but were adapted to suit the location or location to suit the cultural, human, climatic, and local target material.

Due to the significance of numerous intricate Islamic patterns, the use occurs of its diversity in combining deep connotations and expressing beauty in the interior. The power of Islamic patterns to convey a profound message comes from its manifestation of Islamic principles that are integral part of creating such patterns. Islamic patterns serve as an instrument for conveying Islamic values and bring a perception of beauty and elegance to the interior and their designs and patterns. Therefore, it is essential to investigate how the use of these patterns in interior products affects spirituality and

beauty, considering their potential as a means of addressing both meaning and beauty at the same time.

The beauty of Islamic patterns is not restricted to traditional or religious objects. Their application can also be seen in modern-day today products. For example, the leading contemporary designer Nada Debs has collaborated with international brands like Ikea. She took inspiration from traditional Islamic patterns and applied them to interior products like Lamp, various furniture, etc. Her products have distinctive Islamic pattern designs with a modern twist.

Therefore, the present study focuses on "How Islamic art has transformed during the time of genesis and how it has been used in the contemporary scenarios". Through this paper, the researchers intend to examine the adaptation and application of Islamic patterns in contemporary interior design, intending to track and understand the use of Islamic patterns in trendy interior products by leading modern brands and designers. This can be done by following the produced products as these Islamic patterns have been precise indicators for the well-established conceptual bases, their influence, and their broad influence by patterns.

METHODOLOGY:

This research will use historical analysis along with the design analysis of the interior design products and services offered by many interior design product creators and sellers. In this quest, the design of such products displayed on such producers' and sellers' online platforms will be analyzed using online research methods (ORMs) to focus on Spatio-temporal changes that accord with the contemporary observations.

LANGUAGE OF PATTERNS:

How can we explain the phenomenon of patterns? Is it the deliberate outcome of human choice or human mistake? The natural world is full of astonishing patterns and designs (Beyer, 1999). One might discern patterns in the leaves on a branch growing in a repetitive design, flower petals, and a snowflake forms a beautiful pattern. Some innate instinct drives animals to create symmetrical patterns in herds, a flock of birds flying in formation, schools of fish, or packs of deer protecting themselves. The wings of a butterfly form a pattern, as one wing is the mirror image of the other (Beyer, 1999). The feathers of a peacock have very intricate and colorful designs. Moreover, patterns can also result of the creation of the human mind and hand, either abstracted from the natural forms or purely new patterns that have no relation to the natural world. In design, patterns are not always linear or banal. Designers try to make it more interesting by modifying the shape and color. This is not an easy task to trace the origin of patterns and when they were initially applied; as in the words of Bayer: - "**Pattern and ornament are as old as creation and are found in every culture no matter how primitive, and the reproducing of patterns inspired by the beautiful patterns by nature, has been a basic design principle throughout the history of humankind, in the forms of body decoration, utilitarian and decorative objects such as pottery, weaving, and architecture** (Beyer, 1999)."

WHAT IS AN ISLAMIC PATTERN?

The exquisiteness of Islamic patterns is full of the profound beauty of complexity. Patterns in Islamic structures serve numerous functions. For instance, these patterns emphasize structure, balance, and counterbalance in architectural traditions. Since its

inception, mystics and theology have used geometry as a focal point, as it conveys the idea of the orderliness of both paradigms, i.e., the cosmos and the natural world. (Henry, n.d.)

Thus, patterns in Islamic art and culture are described with the help of applying philosophy instead of material or color. In Islamic art, circular geometric patterns indicate the first sign of union and an essential source of all diversity in nature (Henry, n.d.). The natural division of the circle into equal division is the standard beginning of many traditional Islamic patterns.
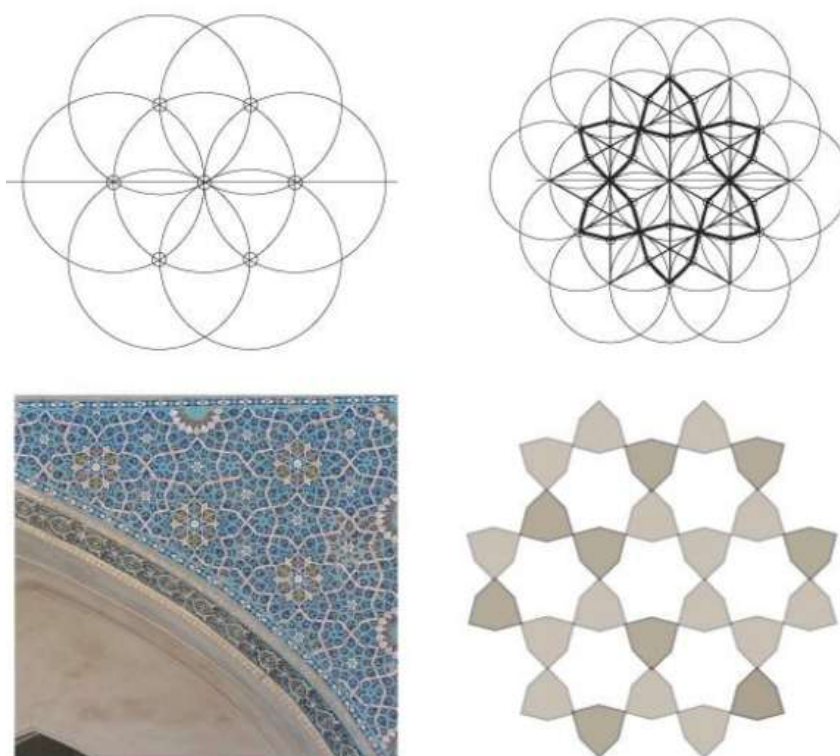
Geometrical Pattern Design from the circle (Henry, n.d.)

In Islamic geometry, the circle is the supreme foundation of all creation and represents the symbol of unity. The natural extension and division of these important motives into standard divisions is the beginning of many patterns, and it establishes the three most important figures i.e., the square, the triangle, and the hexagon. In Islamic art, decoration is a constitutive element, and principles of geometry work as an ordering paradigm for all the aesthetic schemes. Artisans used geometrical and vegetal (arabesques) themes with endless complexities and included calligraphy in their designs of objects. They have been designed in a way to provide the structure of the building and its component with a sophisticated and intricate intersection, including their structural foundations usually of a different component as with an exterior skin or "mantle" (Kassim, et al., 2014). Islamic artistic decoration is not only limited to the covering of places; it also assists in transforming the space. The surviving architectural

building and monuments haled us to understand the evolution of the Islamic pattern of Muslim dynasties.

Islamic art and culture incorporate all existing cultures into a unique culture in its long journey. The aesthetics in Islamic culture exploited every element used continually regardless of its use and product. In India, Islamic art has emerged in the form of Mughal art by integrating and marring the local and regional elements. Islamic art and culture are exhibited in various materials, including pottery, manuscript, metal, coins, glassware, calligraphy, textiles and carpets, wooden objects, ivory, tile work, pottery, and a minor artifact engraved. Islamic art embellishment can be seen as wood carvings, brick, stone carving, mosaics, tile work, stucco, trellis work, and stone inlay that culminates in decorative peaks such as pietra dura jewelry (Pitkar, 2010).

Jali (marble lattice screen) Shaikh Salim Chishti Mausoleum, Fatehpur Sikri, Uttar Pradesh

Image source: Photo: by Dominic Taylor

link: https://artofislamicpattern.com/resources/picture-galleries/india/#/0

ROLE OF THE INTERIOR IN ISLAMIC ART AND CULTURE:

The relationship between art and spiritual methods has been strengthened and explicitly determined since the beginning of its inception. Artist had created an ambiance that includes both religious and spiritual principles. The interior of the Islamic style has unique features that reflect the Islamic style's spirit in the interior spaces. The interior quality is connected to the feature of the elements used to achieve cultural and traditional demands. Each culture has a unique set of elements influenced by its cultural value (Shafiq, 2014). The relation between cultural needs and interior design is represented in collecting the elements in the space. According to Abdulqader,

"the primary role of Architecture and interior design and fashion is first to qualify the cultural and religious needs, which users generally reform to be prepared to use in the interior space" (Abdulqader, 2019). Islamic style interior has unique features which symbolize its spirit. However, the traditional interiors of the Islamic style follow the principles of producing an interior with natural settings. The excellence of interior space is connected to the quality of the elements used to achieve cultural and traditional needs. Each culture has a particular set of these elements influenced by its cultural value (Abdulqader, 2019). The relation between cultural needs and interior design is signified in gathering the elements in the space.

The interior design in the Islamic buildings comprised elegant elements, mainly involving geometric patterns with unique colors. These patterns are decorative elements that are used in several buildings type. However, some elements are functional elements, such as the handrail, arches, columns, ironwork, tiles, etc. Each building included cultural properties and elements in addition to the religious impacts. The courtyard house consists of the essential element, but each culture added the identity of the place of that culture. Its source is the ancient civilization of Mesopotamia. The courtyard is one of the Sumerian architectural figurations. In Islamic architecture, the courtyard is of multi-functions (Abdulqader, 2019).

ROLE OF THE INTERIOR IN THE CONTEMPORARY WORLD:

In the contemporary world, interior spaces are not limited to certain functionality; however, they are embedded in the deeply personal and cultural meaning. They also symbolize individual histories, relationships, values, and a sense of belonging. Therefore, interior designers deal with the human way of relating to the aesthetic aspects of the interior and environment that genuinely signify the social and intellectual needs of the users. They also contribute to human well-being by analyzing user needs, prices, functions, and aesthetics (Butterworth, 2006).

A lot of work has already been done to identify the speculative meaning of non-verbal elements in interior design, critical thinking research, and local penchants, both of which contribute to the work. Numerous studies have argued the unspoken effects and impact of symbols on internal structure. In addition, Nasar (FATIHADDIN, EVES, & GASHOOT, 2018) has identified and measured the non-verbal value driven by sites that transmit diverse emotional responses that should be appropriate for their work, ensuring that the interior creates an emotional atmosphere and explanations from the occupant. The environment can affect a person's behavior in two ways: proximity and avoidance.

DISCUSSION:

The artistic world of decorative styles seen in the Taj Mahal or the Middle East has always captivated visitors around the globe. Their genres' extravagant complexity and exuberant details stand out in geometric designs and floral arabesque. Through the new mediums, the designers are no longer limited to copying the existing motifs or using computer software in the modern world. In contrast to the past, the modern designers provided with modern tools do not have to follow their artistic instinct nor rely on their

heart's souls to artisans. By using such technologies, designers can effortlessly recreate the traditional designs or present them with a modern twist according to the market's demand.

Islamic artisans created incredible patterns with exquisite niceties using scale and compasses. The principles of ancient Greeks highly influence ancient Islamic principles. Their art took to a whole new level through their understanding and amalgamation of artistic skills. They were influenced by the ancient Greek instructions and rules of mathematics, which they have artistically taken to an entirely new level. No matter how intrinsic may the pattern seem? There is always an always created on a grid and a series of repeated lines and shapes. These patterns have developed with time and changed with different/ various/ Respective regions. They were used to decorate many interior products like pottery, tiles, rugs, ceilings etc.

Islamic patterns are still being implemented design in many domestic and architectural forms. Their application can be seen in furniture, screens, prints, rugs, and other embellished elements to provide a middle eastern style to different spaces. They are also often presented in the façades of structures like mosques, some city buildings, and traditional institutes. The following study investigates various interior products and attempts to find their inspiration. One of the fascinating examples in architecture is the Yard master's building in Melbourne by Mc Bride Charles Ryan, using ten folded geometrical designs. Another contemporary architectural example is The Alambagh bus station in Lucknow. Both of this contemporary architecture are live examples of the angulation of modern & tradition.

Office Building in Melbourne, Australia   by Architects: McBride Charles Ryan

Image source: https://www.archdaily.com/343182/the-yardmasters-building-mcbride-charles-ryan

The Alambagh bus station, Lucknow

Image source: Google Images

Lebanese designer Nada Debs, collaborated with one of the global brands **Ikea,** for interior products. She used Islamic patterns, which are very recognizable, but it has an entirely different function. It's modern and traditional at the same time. These designers have not just amalgamated these components (contemporary + traditional), but they have given a new life to the craft. Designer Nada Debs said about her works. "Middle Eastern influences inspire my work, but the goal is to have a global appeal." -Nada Deps

Contemporary furniture design by the designer "Nada Deb's"

Image source: https://www.theinvisiblecollection.com/journal/all-stories-2/?all
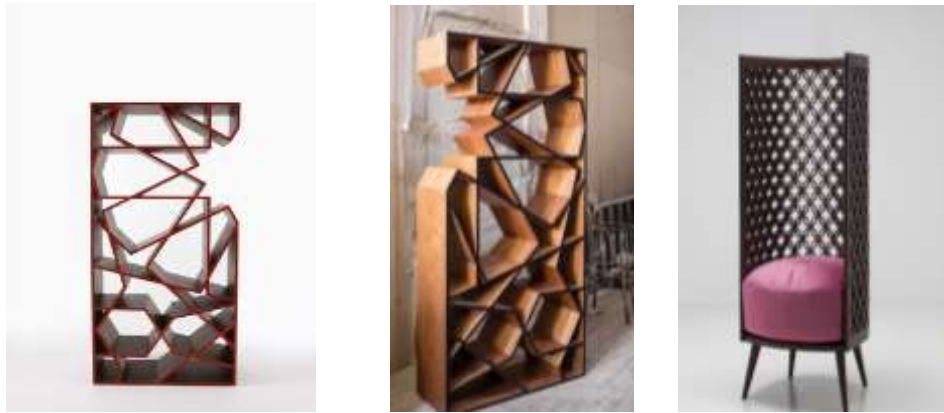
Star Shelf and chair designed by Nada Debs

Image source: https://www.theinvisiblecollection.com/journal/all-stories-2/?all

IKEA collaborated with leading Lebanese designer Nada Debs for the collection LJUV-which is the direct translation of the 'Delightful' in the Swedish language named after the Swedish word for delightful. This is a stimulating unification of intrinsic Islamic design with Scandinavian simplicity.

This collaboration involved a combination of large and small decorative and functional elements. Designer Nada loves to combine key elements with patterns, such as wood and metal, in beautiful ways, works closely with handicraft techniques, and treats each item as unique (Ikea, 2019). To reach the most important number of customers, they focus on making the collection affordable, simple, and packaged. They incorporate Nada's ideas, skills, and strategies into five aspects of IKEA Design: form, function, quality, and affordability (Ikea, 2019).

Designer 'Krsna Mehta' from India recaptures Mughal aesthetics in his designed products. His designs are appealing with bold, bright colors and contemporary twisted materials. "India Circus" is a venture with modern sensibilities curated with reinvents the forgotten elements using silkscreens on canvas, digital photography, paint, and embroidery.

Signature Windows Nesting Table by Designer "Krsna Mehta"

Image source: https://indiacircus.com/signature-windows-nested-table.html

99

Furthermore, for better understanding of application of Islamic elements in contemprory world, Here are the following contemprory products. This table mentions a variety of products by some of the brands and individual artists, who associate their products which are inspired from the Islamic patterns.

Brand Name	Image Of Product	Description	URL
Freedom Tree		**Wall Art:** Inspired by the Mughal lattices and floral trellises, the print is an intriguing study of line and geometric symmetry. This particular product for the interior combines the patterns with print graphic impact. This artwork is printed on high-quality feather texture paper printed using Latex technology with eco-friendly water and latex-based ink and encased in a fiber frame with a glass front.	https://freedomtree.in/collections/wall-art/products/ethnic-geo-trellis-wall-art-pink-orange
Indian Circus		This product **Rose Mallow Moscheutos Cup and Saucer** is from the "Indian Circus" website. It features floral shaped patterns in green and red, with the soft color reminding of architecture's jail/ testation patterns.	https://indiacircus.com/rose-mallow-moscheutos-cup-and-saucer.html
Indian Circus		This intricate piece is titled Indulgence Gateway **Canvas Wall Art** (16"x16") from the house of India Circus. This eloquent design screen is replicated from the carved stone screens of Fatehpur Sikri. And then added with the material on Canvas Print with wooden stretch mount and floral composition.	https://indiacircus.com/indulgence-gateway-vertical-canvas-wall-art.html

Indian Circus		Moroccan's imaginative designs and onion dome are inspirations and blend in with the modern and creative design. With an attractive collection and fun luxury, Designer Krsna Mehta again captures the beauty of Islamic Mughal with exemplary translation. This collection is inspired by rich historical patterns and incorporates powerful modern elements. Influencing the sense of drama and geometry throughout its range, this collection focuses on symmetry and balance to ultimately create integrated compositions.	https://indiaci rcus.com/trad itional-copper-ogee-lantern.html
Wooden Street		This decorative iron wall sconce with glass panels and intricate handmade artwork filters light to create a beautiful play of shadow. This product is inspired by the ornamental Arabic lantern and uses intricate patterns. This lantern with the frosted incandescent lamp provided ethnic and elegant touch to a space.	https://www. woodenstreet. com/vintage-moroccan-decorative-wall-lamp

A balance between modernity and tradition creates endless design opportunities for designers in the contemporary world. The outcome of this study for geometrics designs, whether conventional or digitally (software made) done towards that creativity, colors, layout, patterns, and unity would have a relation in terms of measured values. On the one hand, the development of the patterns can be seen in the found products examples; on the other hand, some of the patterns remain constant in terms of evolution and complexity. It shows how the Islamic patterns from architecture and other cultural art forms have been used and retain their primary forms, as seen in the earlier examples. The amalgamation of these patterns with modern material gives them a new identity on different materials with different techniques.

MATERIAL PRACTICES:

The design world is looking to constantly evolve, creating new trends and styles to satisfy clients & desires. Interiors are now considering incorporating seamlessly with the

101

users, irrespective of their style and tastes, Combined with the need for durability and sustainability (Sparkes, 2021). This universal blend of concepts brings about Islamic interiors a much replicated and celebrated form across the globe (Jose, 2016). The application of contemporary designs has its root in the phenomenal structure of historical Islamic monuments. The modern interior combines the best of modern beauty with Islamic patterns. It is the ultimate possible combination of these two senses. To meet contemporary standards and provide it with a sleek and stylish look, designers adroitly bring in the minimalism of contemporary interior design and the geometrical aesthetics of Islamic designs.

Bedroom décor, inspired by Moroccan interior   Geometric Motifs/Tessellation,

Image source: 1. Google Images

Image source:2. https://qanvast.com/my/articles/6- must-haves-for-a-modern-muslim-home-997

People want their home and interior design to embody the intricate design that blends in with the beauty of the traditional style in line with the modern ending. In order to meet the demand of customers, modern materials have replaced raw materials such as marble, stone, tiles, etc. New items are more affordable as par decoration. These materials not only last longer but are also compatible with machine cuts. For example, a geometric pattern in the railing strongly encompasses the slippery surface area. Decorative lamps that pride the Islamic beauty style shine brightly against empty white walls reflecting the elegant contemporary style.

Furthermore, the designs of pointed arches have been employed thematically throughout the interiors. Modern materials such as wood and metal panels are widely in use with the intricate carvings and precise finishing achieved mainly by machines in the contemporary scenario. Metal panels are also in trend, which can be for indoor and outdoor designs. It can be set up in an exterior setting as a shading device, making them functionally feasible and aesthetical. It can improve the spatial quality of the space by creating inventive shadows as the natural light moves through the laser-cut patterns. Other applications comprise window screens, handrail screens, partitions, etc.

The Designer's goal is to capture the dichotomy of two different aesthetics cohesively inside the modern interior design.

CONCLUSION:

The current paper highlighted the evolution and application of contemporary Islamic patterns, which few studies deal with in-depth analysis of the products. The study's focal aim is to find the relation between culture, religion, and implementation on interior design. The influences of culture and religion are apparent in the Islamic style, which used the principles, elements, and factors to serve the characteristics of the style. Simplicity, Geometry, and modernity are the main points that designers should consider in designing and conserving interior objects while keeping the essence of basic principles intact. However, the variety of elements form, color, and principles reflect the unity in the space, which is the identity of the Islamic style. The excessive modification in the style reflects different principles, which are out of the Islamic tenets. Therefore, the study recommended doing deep analysis before designing the Islamic style. Using different set of principles could lead to losing the typology of interior products in Islamic design.

AUTHORS NOTE:

This paper originated as an inquiry to understand the influence of Islamic designs on interior design. Finally, the authors thank the members of the editorial advisory board. We are thankful to the referees for their valuable suggestions and comments. All the cognitive errors and misconceptions naturally remain our own.

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Influence of Digital Technology on Contemporary Indian Art

Amita Pawar

Abstract

Art is an integral part of the culture of India. Because of the vastness and diversity of the culture, Indian artists create a myriad of art, making it famous worldwide. Artists employ various technologies in printmaking, photography, film and video in creating pieces of fine art. Today, computers are one of the significant faces of this union of art and technology, changing the way art is created, viewed, appreciated and sold. Both traditional and digital processes of making art require experimentation, experience, knowledge and skills. This paper will cover three ways namely digital art, 3d printing, and social media, in which technology is affecting the art. Digital art is a revolutionary concept and is a rapidly accepted art form in the contemporary Indian art, giving it a completely new dimension. It involves art forms created by artists with the help of the digital technology or sometimes modified by computer software, which is an outcome of two forces, human creativity and computer technology. Today, many artists are utilising technology to create art. The digital revolution has been effective in bringing out new dimensions in contemporary art practices, and digital artists have numerous pathways for intensifying talent and sharpening the skills of an artist. 3D Printing technology could be very beneficial for the artists as a bridge between technology and handmade crafting and sculptures. Desktop 3D printers can make 3D figurines, sculptures, gears and parts, etc by depositing layers of extruded material like plastics, ceramics, metals, even wood filament, one thin layer at a time using computer aided design software. For large projects, robots use algorithms to create complex structures. Artists have explored the cost savings use of 3D printing on demand and feel that the medium will create opportunities for young designers and inventors. A major population of the urban world today, uses social media as the means of creating ideas, exchanging information, images and videos through networking. The internet technology and the facility of social media create global communication in a faster way which is otherwise not possible in the physical world. This is changing the way we experience and view exhibitions and how we perceive art. In the recent days it has brought various art forms of music, dance, folk art etc, on a common platform more reachable to the public. Since these media have a powerful penetrating reach among today's youth, it has the potential to engage our present generation with our traditional art and cultural forms in a more innovative manner. It can be used as a tool for documenting and preserving the dying art forms and rejuvenating the ones which are almost lost. Recognising this, the Indian government has also introduced tremendous changes in terms of adopting social media and website usage in the execution of its duties and programs, and in the promotion and preservation of art and culture.

Keywords: Indian Art, Digital Art, 3D Printing, Social Media.

1.) Introduction

Art is an integral part of the culture of India. Because of the vastness and diversity of the culture, Indian artists create a myriad of art, making it famous worldwide. Artists employ various technologies in printmaking, photography, film and video in creating

pieces of fine art. Today, computers are one of the significant faces of this union of art and technology, changing the way art is created, viewed, appreciated, and sold. Both traditional and digital processes of making art require experimentation, experience, knowledge, and skills. This paper will cover three ways namely digital art, 3d printing, and social media, in which technology is affecting the art.

2.) Literature Review

The rising of information and communication technologies (ICT), during the third Industrial Revolution, caused much economic, technological, and socio-cultural changes including the arts. Information and communication technologies have accelerated the consumption of content and arts in art markets, as internet technologies help global operations and also new web-based business models assist the established ecosystem of art. Owing to this global effect, Indian Art institutions and organisations too, have increasingly embraced new media for display, promotion and conservation of their art collections, with an aim to create a unique art experience for their audience. Indian Artists now engage with peers, galleries and customers via social media as cultural identity branding and competition increase in the digital age, while experimentation with new media gives rise to various new art forms [9] that extend the existing boundaries of contemporary art and museum collections. As a result, artistic production, as well as buying, are not localized anymore. Small Indian villages and cities can connect to a global audience via the internet. And thus, Indian art markets have gained momentum as well as a lot of exposure because these are now interconnected with the global art centers. They now have access to markets that were impossible to reach earlier.

Information technologies have also helped fuel entrepreneurship in the artistic fields, empowering art agents to create better value in the art market by developing online art business models. However, they don't replace traditional art businesses, which are still helpful in introducing new artists to the market and in the art world. Online art businesses are flourishing because they provide the opportunity of being independent in the already established art market. New Information and communication technologies have also gained momentum in the Indian Art institutions, that effectively use digital technologies in art to enrich audience experience regarding both offline and online learning. For example, digital technologies enhance the exhibition and museum environment as interactive information providers like audio aids, mobile applications, augmented reality programs, interactive labels and media guides. In areas of online learning, interactive classroom applications, virtual tours of museums etc, enrich the learning experience. Projects like Google Art Project provide an interdisciplinary collaboration between technology firm and museums to create such virtual tours. Social media also, contribute to the essential component of cultural branding, as artists construct originality and authenticity in the form of digital stories and narratives that provide greater visibility and intellectual and emotional engagement with the audience. Another very useful new technology, 3D printing helps to recreate and repair damaged art objects. This marks a great paradigm shift, especially for museums and art institutions, which can now aim to create customized learning and interacting experiences which can meet the requirements and expectations of individual artists, artisans, and visitors. Artists also use digital technologies in creating art forms like photomontage, digital painting, digital sculptures etc, using computer software.

In the following paragraphs, we discuss three such technologies namely digital art, 3d printing, and social media, that are remarkably influencing Indian art.

2.1) Digital art

Digital art is a revolutionary concept and is a rapidly accepted art form in the contemporary Indian art, giving it a completely new dimension. It involves art forms created by artists with the help of the digital technology or sometimes modified by computer software, which is an outcome of two forces, human creativity and computer technology. Today, many artists are utilising technology to create art. The digital revolution has been effective in bringing out new dimensions in contemporary art practices, and digital artists have numerous pathways for intensifying talent and sharpening the skills of an artist.

Digital art has gained understanding and reputation in the modern art culture because it encompasses the historical development of art and focuses on technologies to adopt and integrate changes in various fields of arts such as videography, photography, installation, sculpture, graphics, and painting. Art grew in prehistoric days in the form of sculpture, painting, and drawing, gaining attention of people. Similarly, computer has become popular in India since 1960 with engineers and scientists at the forefront. In the Indian art scene, digital technology emerged in the year 1990. Digital art has contributed a lot to the contemporary art by providing marvellous and endless ways of artistic expression.

Figure 1. A digital art by the American artist Beeple, sold for $69.4 million, and bought by an Indian origin crypto invester Metakoven..

Digital art is essentially an artistic piece of work or practice that uses digital technology as an essential part of the creative or presentation process. Also called computer art or multimedia art, it is placed under the term new media art [1]. Digital art can be totally computer-generated or generated by modifying elements taken from other sources, like a scanned photograph or a drawn vector graphic image. Digital painting softwares like Adobe Photoshop, Corel Painter etc give artists an environment similar to a physical one like a canvas, brushes, mixing palettes, multiple colour options etc.

While digital art allows the artist to work easily in an organized environment, some argument surrounds that there is an important element missing from digital painting, i.e. the character unique to every physically and traditionally made painting. Whether or not this is relevant does not change the fact that the computer has been a boon for artists, who can create something that was not possible earlier. Advanced digital art software has not only made the drawing process easier but they have also helped

107

enhance the creativity of an artist. Thus, digital painting is not just a new medium but a whole new artistic process including a range of existing mediums, supplemented with new features. Digital technology and art [2] interact to give rise to a new and more challenging area of work. Digital art is not just a random creation of artwork. Planning and keen attention to the details in planning the process and using the applications is important. The digital process of creating art enables traditional artists to design their artworks on a computer then make it in a traditional medium, thus visualising more accurately how the end product will look like. The significant changes in this art form in terms of expressing the new innovations by utilising digital technology are reflected in the multimedia art of Ranbir Kaleka [5].

Figure 2. An artwork by Indian multimedia artist Ranbir Kaleka.

His work is often termed as surrealistic. Ranbir Kaleka's works usually follow a dreamy logic and narratives. While his earlier works weave together seemingly unrelated, fantastic elements, his later works are more open ended and communicate with the viewer, thus making their viewing an interactive experience for the audience. During the later phase of his art career, Ranbir Kaleka's work has found expression in multimedia and video art, projecting video onto painted canvases, thus employing digital technology to draw the viewer into the narrative.

Aditi Dash, a Mumbai-based visual artist and illustrator play with digital color and textures which make her work magical. Along with doing illustrations, she has also worked on branding projects for established brands. She uses playful, progressive, & experimental with a focus on translating narratives into functional & meaningful visual dialogues. Her diverse approach to aesthetic imagery merges structure with a sense of play. Using a collaborative approach to design, she helps brands, individuals & businesses communicate their stories through compelling visuals [6].

Figure 3. Digital Illustrations by Indian Illustrator Aditi Dash.

Thus, digital artists are blending art with technology and in the process discovering a multitude of ways to intensify talent. and renovate art in a unique way.

2.2.) 3D printing

3D Printing technology [3] could be very beneficial for the artists as a bridge between technology and handmade crafting and sculptures. Desktop 3D printers can make 3D figurines, sculptures, gears and parts, etc by depositing layers of extruded material like plastics, ceramics, metals, even wood filament, one thin layer at a time using computer-aided design software. For large projects, robots use algorithms to create complex structures. Artists have explored the cost savings use of 3D printing on demand and feel that the medium will create opportunities for young designers and inventors. 3D printing is an additive process of building a three-dimensional (3D) physical object from a digital model data (Computer Aided Design or scanned object) file by depositing and forming successive layers of material with the help of computer [4].

3D printing technology has created and helped facilitate a new, material-based approach to design. Designing and making are widely thought of as counter-acting the industry-led manufacturing which led to the decline of craftsmanship, by standardising the process of individual making. The ease of use, availability of hardware and software for 3D printing, along with decreasing costs of 3d printing in recent years, has significantly changed the creative and design industry. With 3D printing both the optimization of existing designs and the design of completely new objects are prevalent. We can find a number of 3D prints which are digital replicas of existing objects, uploaded on maker websites such as Google warehouse.

Figure 4. 3D printed crafts.

Crafts are in general are guided by tradition, availability of materials, and manual techniques, objects constructed by hand. Digital fabrication techniques like 3D printing offer new possibilities for design practitioners and craftsmen. The Indian handicrafts sector produces finely crafted delicate handicrafts using a range of raw materials. These include jewelry, stonework, clay work, metal and leatherwork, textile printing and embroidery, wood carving, glass etching, etc. The industrial revolution led to a smaller role for the craftsman. The factory line and the machines dominated the mass production process removing imagination and skill. Handicraft products are facing competition from machine-made products. The use of CAD/CAM in the area of

craftwork can be used as supportive tools for a craftsman to explore their artwork and get access to digital manufacturing. Technological hardware like 3D printers can help the designers and handcrafters in expanding their production capabilities at the individual or community level. Here the priority is to provide tools to designers, not automate the production process. In order to provide the craftsman with easy access to such tools, it is important to ascertain their availability in the public domain so that these can be used by an artisan for expanding the design and production area of handicrafts. Using new technology for enrichment instead of substituting traditional techniques, designers can create distinctive objects, that are unique.

3d printing can create an infinite amount of different complex shapes or even intricate art forms and pieces. Repeat printing can be done without repeating the effort of the first masterpiece as the virtual file can be saved and accessed again for reprinting. 3D printing can be used in the fields of archaeology, artifact creation, and restoration as well to repair or recreate artifacts and preserve the perfect design data for future use. 3D Printing can let artists create molds for low volume production 3d printing allows. 3D Printing gives you the choice of complexity and countless iterations on the design materials, sizes, and production sizes hence virtually no restriction on the size of the mold or the end object.

Becca Rosen, a San Francisco-based designer writes about her explorations in India with 3D printing and traditional block printing, addressing how technology can potentially help artisans evolve within a rapidly globalized marketplace.

She explores whether 3D and woodblock printing is combined in some form to incorporate modernity but still maintain the traditional form. She emphasizes that we need to ensure that the machine does not replace the craftsmen, rather the craftsmen use the 3D printing machine to create new products which were not achievable before. She explores aspects of increasing productivity, eliminating waste, lowering production costs, and helping produce crafts in a socially and economically beneficial context. People usually associate block printing with traditional simplistic motifs. But in reality, it is possible to achieve complex and intricate designs.

Along with Padmini Govind of Tharangini, a block printing studio in Bangalore, Becca began working on some prototypes to put the concept of 3d printed blocks, which worked beautifully [7].
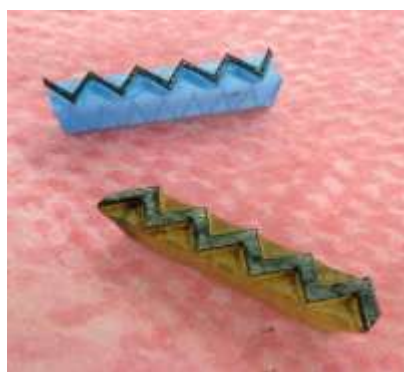
Figure 5. A 3D printed block in blue colour and a traditional wood block in yellow colour.

Another Bangalore-based artist Naveen Kumar explores 3d printing as a way to create sculptures to tell his stories. he uses materials like sugarcane fiber and resin and as a result, his sculptures have a rough texture. Combining a very futuristic idea of 3D printing with traditional narratives, the storytelling becomes interesting [8].

Figure 6. An Artwork by Indian Artist Naveen Kumar

The livelihood of the Indian artisan is under threat and it is worth exploring all conceivable avenues to keep craft alive and flourishing, in order to succeed in ushering it into today's cultural landscape and thus bridging tradition with innovation.

2.3) Social Media

A major population of the urban world today uses social media as the means of creating ideas, and exchanging information, images and videos through networking. The internet technology and the facility of social media create global communication in a faster way which is otherwise not possible in the physical world. This is changing the way we experience and view exhibitions and how we perceive art. In recent days it has brought various art forms of music, dance, folk art etc, on a common platform more reachable to the public. Since these media have a powerful penetrating reach among today's youth, it has the potential to engage our present generation with our traditional art and cultural forms in a more innovative manner. It can be used as a tool for documenting and preserving the dying art forms and rejuvenating the ones which are almost lost. Recognising this, the Indian government has also introduced tremendous changes in terms of adopting social media and website usage in the execution of its duties and programs, and in the promotion and preservation of art and culture.

Social media is changing the way we experience art and culture, and the way in which we create, share or exchange pictures, ideas, and views in virtual communities and networks via websites like Facebook, Instagram, Twitter, YouTube, Blogs, and WhatsApp etc. Social media has impacted the way we have an interactive dialogue and also keep in touch with friends, family, and communities, both at a domestic and global level.

Indian society is one of the most complex societies in the world, consisting of innumerable diverse religions, castes, language and cultures, and arts. The influence of any new invention is very complex. Social media came to India very recently and its impact is being felt very strongly already. The challenge now before the Indian society is of bridging the gap between 'tradition and modernity, Even though the internet and computers are not accessible to everybody yet, in Indian society, it is spreading very fast and if used appropriately, social media can be highly beneficial.

The Indian government and the administration have also brought in drastic changes in terms of adopting social media and web pages for the execution of its programs and schemes. Important web portals launched by the government and autonomous organizations under the Ministry of Culture, Government of India Ministry of Culture, are working towards the promotion, preservation, and dissemination of all forms of art and culture. The Centre for Cultural Resources and Training (CCRT) is one of the premier institutions that is working to link education with culture.

Facebook is one of the most powerful interactive social media platforms where billions of people connect with each other with common interests, lending a great boost to art and culture. Artists, like musicians, dancers, painters, and designers can post their work in form of photos as well as videos and interested people get in touch with them to learn or buy or share their work. Instagram, a photo and video-sharing social networking service has become the social photo platform for promoting art and is changing the way we experience and view our visits to exhibitions. YouTube is an American video-sharing website, that allows users to upload, view, and share videos. Both individuals and large production companies use YouTube for growing their audiences. Independent content creators can build followings at very little cost or effort. Recorded videos of many Indian art and cultural forms have been uploaded onto YouTube and due to ease of availability, the young generation is keenly interested in following it up. Traditional art forms which were earlier passed on from one generation to another, now are increasingly shared via videos and image archives, making it an altogether different way of learning for the coming generations. WhatsApp groups can allow people to form communities geared towards sharing knowledge, creating art forms, or selling to the market, with easy connectivity via messages and calls.

The role of social media in the promotion of Indian arts and culture, as well as the business and consumer market in India, cannot be undermined. Social media is being used generously to build communities for interaction and for spreading awareness as well as the distribution of commodities. Social media can help to promote our traditions and approach the change in social-cultural, and artistic endeavors with help from technological advancements.

3.) **Conclusion**

The advent of digital media technology and the internet has drastically changed the way we perceive art. Creating and viewing art is an altogether different experience. With the help of technology, the promotion of art at the global level has become easier. Technology is helping in the effective development, promotion, and preservation of Indian art.

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The Socio-Economic Value of Additive Manufacturing Technology to Indigenous metal Sculpture: A Case Study of Swamimalai Bronze Icon

Aravind Prasad S, Vinoth Kumar S, Kalaiselvi R, Venkatesh K & Sathish Kumar AS

Abstract

Archaeological preservation, restoration of prehistoric artifacts, and recreation of lost delicacies are a few of the several areas where additive manufacturing has taken a foothold in generating substantial value accommodating heritage into technology. However, the contributions of such technological advancements toward the sustenance of sculptor's communities from an economic perspective remain unsurfaced. A concoction of the future with the past is essential to enrich tradition throughout the years to come. Such a feat lies primarily based on value-addition; through the infusion of technology as part of the existent customary methods. It is herein discussed the scope of economic and social benefits bestowed upon sculptors by the adaption of 3D technologies. Along these lines, a case study on Swamimalai bronze icons is presented to validate the crucial advantages of 3D scanning technology for the preservation of heritage design intricacies in form of 3D digital models and 3D printing technology for a reduction in production times by printing prime wax models. 3D printed prime models of one of the Swamimalai statues took around 10 hours compared to the tedious 30 hours' workload of making the same wax model by hand. Moreover, accurate details were replicated when the prime model was printed in reduced size using resin-based DLP 3D printers which provided a significant reduction in laborious working hours as high as 80%. In contrast to the loss of wax models in conventional techniques, 3D printed prime models can exist as a base for n number of wax model creations through wax injection processes for subsequent statue production. Additionally, the economic gain upon leveraging the 3D digital models for creating varying sizes of statues are established. In essence, a brief of retaining the social values of sculptor's communities and augmenting their economic profitability through 3D technologies has been portrayed.

Keywords: Indian heritage crafts, Indigenous sculptors, artisans, metal sculptures, Swamimalai bronze icons, 3D scanning, additive manufacturing

Introduction and Literature review

Among the scope of influence extending to manufacturing, construction, automobiles, aerospace, defence, health care, fashion, service industries, and education; 3D technologies and their exercise in cultural heritage plays a more indispensable role (Hannibal and Knight., 2018). Particularly in the domains of restoration and virtual reconstruction of missing parts (Apollonio et al., 2017; Wabiński and Mościcka., 2019). A recent survey of over 153 respondents outlined that 86% believe 3D technologies aid their work in the restoration of art (Acke., 2021). Previously, in aspects of revival and incorporation of innovation to create sustainable heritage elements in architecture; 3D printing was explored. The research portrayed the utilization of 3D printing in the revival of old Mashrabiya architectural screens to meet the modern housing needs while retaining its historic integrity (Headley, 2016). While Randhawa and Gupta (2018) published the virtual restoration of an 800-year-old statue of the bust of Lord Buddha sculpted in the 2nd century AD using 3D scanning and

printing. Similarly, another sculpture known as "Girl from Salona" or Plautila dated to the 2nd century AD deployed additive technology and the work portrayed the sustainability features of the technology such as undestructive methodology, low cost and economic benefits in terms of gaining funds for the museum. (BAŠIĆ et al., 2018). While, the impact of 3D printing particularly on the social and economic realities was illustrated by Birtchnell et al., (2020) about India, its cultural roots, and how 3D printing could manifest the future. The rewarding outcomes of employing 3D printing are understood to not only apply to the production of businesses or revival and restoration but also to, the individual development of artisans. Literature defines the varying alternations that 3D printing brings forth in businesses extending to even ethical issues. Yet, bearing traits such as rapid prototyping and reduction in the generation of waste qualifies it as a technology that aids the creation of sustainable businesses (Wilson., 2017). To elaborate on the convenience that 3D technologies infuse into traditional artisan businesses, particularly in metal sculpting has been relatively underexplored. With specific attention to the making process of metal sculptures wherein extensive manual labor is demanded, it is no doubt that the integration of 3D technologies could remarkably contribute to simplifying the traditional methodologies.

In this context, two of the prominent statues of the SwamiMalai bronze icon collection were chosen for the study to explore the profitable outcomes 3D technologies can imbibe in their making processes. Swamimalai bronze icon commonly known as the Panchaloha statue made in Swamimalai, a small town in Tamil Nadu. The Government of India recognized the eminence of Swamimalai bronze icons with Geographical indication tags and it has been widely acknowledged as an aesthetic heritage beauty worldwide. These icons are primarily produced via the lost wax casting process also called investment casting. Such a conventional method reflects several limitations, particularly on the aspect of difficult and time-consuming labor accompanied by the loss of prime wax models prepared before metal casting. This very feat of overcoming the exhaustive and expensive nature of the wax model process is where 3D printing plays a substantial role (Mongeon., 2015). The present research aims to establish two important aspects of the integration of 3D technologies in the making of heritage sculptures. Including, the economic benefits that artisans entail as a result of 3D printing and the social values that are extended across generations. As the work details the methodology to overcome the labor-intensive steps of the lost-wax casting process with 3D scanning and 3D prime model preparation. Further, the scope of profitability owing to the creation of 3D digital models is presented briefly.

In essence, the current work proposes a feasible social-economic business perspective of a 3D technological workflow that can enrich the livelihood of artisan communities and establish their techno-traditional capabilities.

Methodology
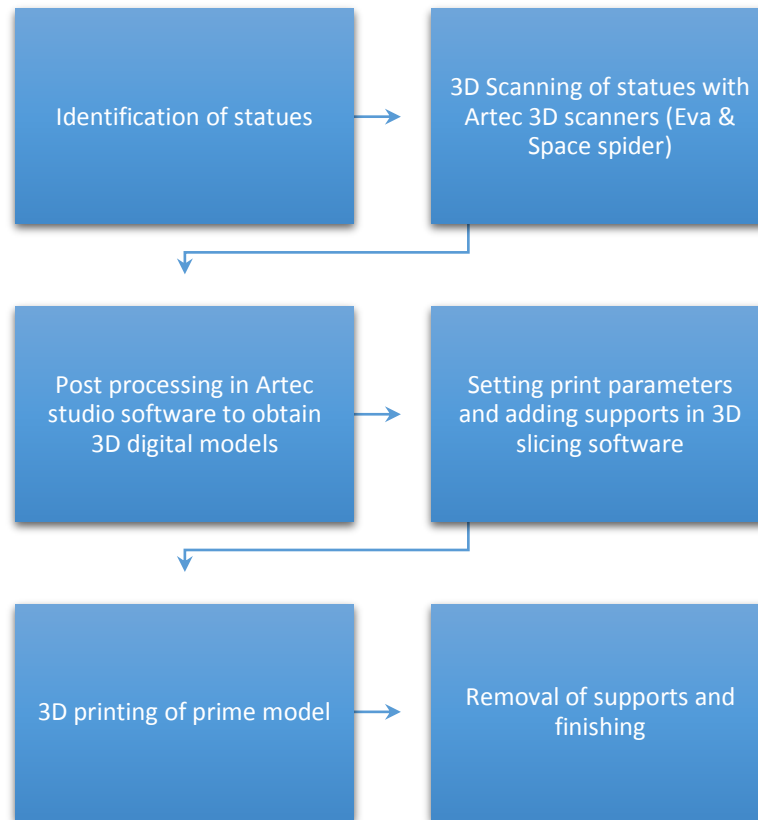
Fig 1. Technological workflow

Two statues namely Srinivasa Perumal in fig 2 and Lakshmi as part of the SwamiMalai bronze icons heritage were identified for the study. Primarily, the Srinivasa Perumal and Lakshmi were scanned via Artec Eva 3D scanner ($61000cm^3$ volume capture zone) and Artec Space Spider 3D scanner ($2000cm^3$ volume capture zone), respectively. Followed which post-processing was carried out and the 3D scanned models were converted into 3D digital models with Artec Studio software. The Chatbox 3D slicing software was later used to import the 3D model of the statues and transform it into Gcode suitable for 3D printers. Customized Digital light projection (DLP) 3D printer with a bed size 345 x 194 x 400 mm was selected and 405nm UV curable resin was used (skin-colored for Srinivasa Perumal statue and green for Lakshmi statue) for 3D printing of the prime model. During the 3D scanning process to rightly capture the intricate details of statues, 3D scanning was carried out multiple times in different

116

positions until all sufficient details were acquired to form the raw scan data. After which the multiple scanned data were merged to form a single 3D digital model with all required geometry and details of the statues. Then in 3D slicing software, the 3D printer's X and Y resolution were set as 3840 pixels and 2160 pixels respectively. Then bed size was altered to 345 x 194 x 400 mm according to the customized DLP 3D printer. Resin density of 1.1 g/ml as per the specification of the UV curable resin utilized for 3D printing. Print settings such as layer height (0.03mm), exposure time (14sec), and bottom exposure time (100sec) were set. Thereafter, supports structure was added to the 3D digital model in places of overhanging to avoid any print failures and the printing hours were determined. For Srinivasa Perumal 10 hours and Lakshmi 10 hours 30 min. It was ensured that calibration of the print bed and LCD projector was performed before printing via a DLP 3D printer. Later, the resin tank was filled with UV curable resin, and finally after printing the 3D printed prime model was removed from the print bed. Post-processing was undertaken by washing with water and removing supports structures.

Fig 2. **3D scanning process depiction of Srinivasa Perumal statue**

Results

Table 1 shows the time taken for the technological workflow and manual workflow for making a prime wax model

Prime wax model of the statue	Time taken with technological workflow (3D scanning, post-processing, 3D printing)	Time taken with manual workflow
Perumal	11 hours	30 hours
Lakshmi	10 hours 50 min	40 hours

Table 1
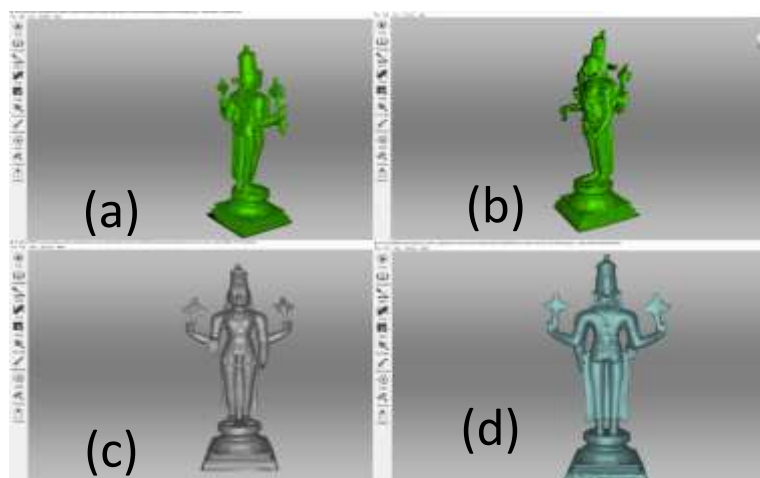
Fig 4. (a), (b) Raw scanned model of Srinivasa Perumal statue

(c), (d) 3D Digital model of srinivasa perumal statue
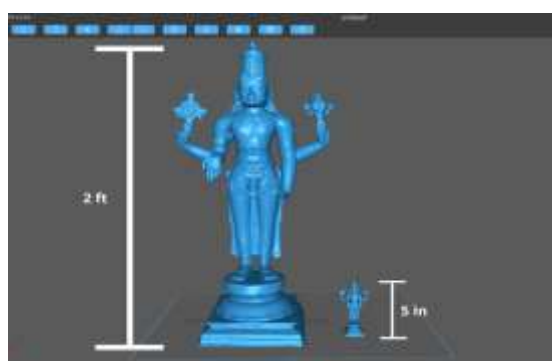
Fig 5. Original size(2ft) vs Reduced size(5in) of the Srinivasa Perumal statue

Fig 6. Preserved details of the 5 inches' statue after reducing from 2 feet

Fig 6. 3D Printed prime model of Srinivasa Perumal statue
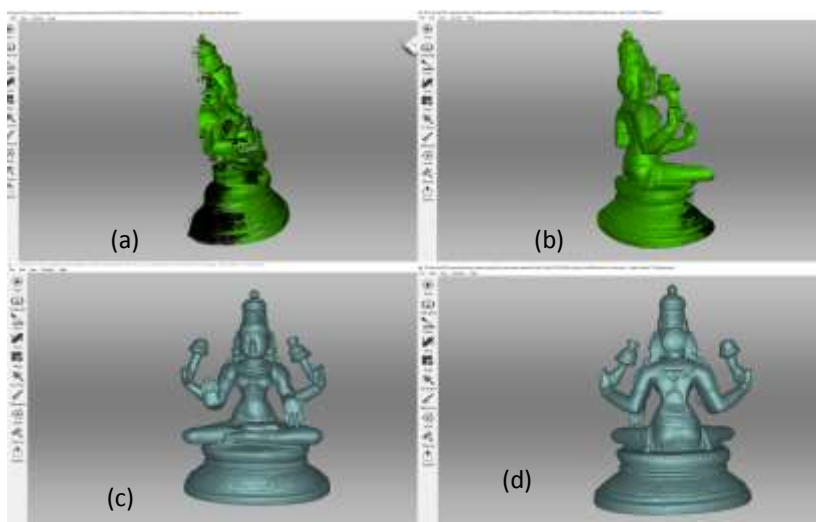
Fig 7. (a), (b) Raw scanned model of Lakshmi statue

(c), (d) 3D digital model of Lakshmi statue

Fig 8. 3D printed prime model of Lakshmi

Discussion

Economic gains of sculptors:

Previously business models for 3D printing technologies were discussed briefly and their undermining effects on the viability of smaller businesses were highlighted. The paper depicted the more unfavorable circumstances for artisans, jewelers, and architects who thrive via mock-ups manufacturing services owing to the rise of 3D printing (Montes., 2016). However, we present a perspective wherein artisans into metal sculpture making could essentially benefit from 3D printing technologies in terms of multiplying their profits. Firstly, the magnitude of time-saving phenomena, it poses owing to the ardent 3D prime model generation. To avoid the loss of prime wax model in the metal casting process, Utilizing the same 3D printed prime model as an ardent base with which silicon molds and multiple wax models can be created by wax injection techniques. Results showed that only 10 hours and 10 hours 30min were consumed for Srinivasa Perumal and Lakshmi statues respectively. Whereas, making the wax model by hand would have taken at least 30 hours and 40 hours respectively. By application of additive manufacturing techniques, exact details and geometry was witnessed in the 3D printed model even when printed in a reduced size. Contrary to conventional techniques where the replication of similar wax models demands skilled sculptors; 3D printing particular to DLP technology provides the capability to print n number (n number depends on the size of the model and printer bed size) of prime models in the same duration taken for a single prime model.

Secondly, by leveraging the size modification features of the technology via 3D scanning, artisans are imbided the potential to produce varying sizes of sculptures depending on the market demands and specific requirements. The platform for customization is created seamlessly by the integration of 3D technologies to their existing methods of production and distribution. Such a feat thereby nullifies the need for creating wax models in the required sizes again and again; as the 3D digital model can be altered to required sizes and used for 3D printing of prime models. In this way, sculptors can create their own 3D digital model databases of their collections that can aid their marketing and parallel increase in monetary benefits.

Social gains:

The benevolence of attention to detail reflected by 3D scanning techniques directly contributes to an immense appreciation of the aesthetics with a greater depth (Jeffs and Byng, 2017). 3D technologies thereby create a platform to build size with extreme detailing coupled with the scope of unique desirable additions. An artisan's desirable textures and creativity can be incorporated to create more innovative and tasteful variations of heritage icons which in turn would improve the acknowledgment of the skills and innovations. 3D technologies aid artisans in developing their communities for the future digital generation to come. Therefore, a Digital skill awareness program whthatncluded 3D scanning and 3D printing was delivered to indigenous sculptors of Swamimalai who are practicing traditional techniques. This attempt was to develop techno traditional techniques and create the platform for upcoming "Digital Artisans". As aptly quoted, "Digital Artisans", this very creation of integrating technology and heritage is the directional shift needed at the moment (Rautray and Eisenbart., 2021).

Conclusion

To infuse profitable extensions of 3D technologies while reviving heritage and traditional arts becomes of prime importance as we move into the digital era. Such a feat is illustrated in the present work wherein a case study of two Swamimalai bronze icons was depicted with the infusion of 3D scanning and 3D printing. In this attempt, the benefits in terms of reduction of laborious work hours, the scope for innovation, and the potential of a 3D digital database have been presented for the first time with specificity to Swamimalai bronze icons. Additionally, the social values of enhanced creative space and the ability to morph into "Digital Artisans" were discussed. However, the work limits to 3D printing of the icons while further exploration and understanding of obstacles in the metal casting processes are needed. Moreover, delving into educating and training artisans to undertake such technological workflow would create more applied frames towards the integration of additive manufacturing.

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Dignifying Traditional Craft communities in-and-around Temple Ghats of Varanasi

Akshay Revekar & Krishna Kumar

ABSTRACT

The craft communities are significantly recognized within every human settlement, positively affecting social and economic well-being. The production of artifacts, crafts, handicrafts, etc., plays a vital role in reducing migration and acting as a barrier to rural-urban migration. Traditional artifacts and crafts dealt with various cultural/ ritual aspects of the social domain. The city Varanasi is regarded as a heritage city with traditional human settlement and is recognized for its prominent traditions, cultures, norms, values, principles, and standards. The city's craft communities around the temple ghats are involved in various craft products such as handicraft handlooms, meenakari work, clay- terracotta works, metal works, bamboo weaving, stone carving, wooden toys, zardozi work, etc. Apart from art and crafts, Varanasi has numerous tangible and intangible heritage, including natural landscapes and the cultural heritage of various artists. The INTACH has also listed around 1700 heritage structures in the city. The primary purpose of this research paper is to encourage and dignify craft communities by highlighting their significant contribution to society. Technology has a vital role in improving the quality, productivity, and acceptability of any type of production in this modern age. In order to rapid mass production, the crafts which have to be produced need mechanical support for further processing and finishing. Various need-based interventions and strategies are to be reframed concerning the new modern age. Existing policy frameworks and institutional support need to be looked out strictly to enhance artisans' quality of life.

KEYWORDS: Artifacts, Artisans, Craft, Craft Community, Product Development, Social Interventions, Tradition, etc.

1. INTRODUCTION

Art & craft influences society by imprinting values of its tradition and culture. India is well known for its skilful craftsmanship and handmade handicrafts. The main areas in the research that have been considered include factors influencing the development of culture and religion, arts and crafts. Varanasi is jeweled with many historical and spiritual structures, including Temples, Kunds, Dharamshalas, and Mosques. Each of these religious institutions was a significant source for these art and craft communities, but with growing industries, markets, and technology, these custodians of heritage arts and craft face modern-day challenges of their daily survival. Diversity and unity are easily envisioned in religion, culture, and society (Panigrahi, 2017). Generally, the craftsmen pass their craft-making tradition on from one generation to another. Art in town is not lesser than the Vedic rituals. The morning starts at ghats with Sabah-e-Banaras and pooja rituals; these artisans also submit their faith in these art forms. Growing industries and competition lead to a dire need to dignify these heritage arts and crafts and artisans who are custodians of these art forms. More than 800 years old traditional art of weaving is on the verge of extinction, and the people involved in craft making are living a distressing life (Terry, 1999).

2. LITERATURE REVIEW

The handicraft industry has deeply rooted and is spread over the entire country. These fine crafts and home-based enterprises in the district are employed in this sector from one generation to another (Banik, 2017). In the global context, under the UNSECO's 17 goals for sustainable development, the support to crafts can be instrumental in achieving goals towards poverty alleviation and environment protection (UNESCO, 2010). Handicrafts in the form of small-scale industries has a major impact in economic development of nation. Even though, the handicrafts traditions have been growing continuously undisturbed over the centuries, they have to face the realities of rapid change brought about by the inexorable forces of communication and globalization. With the advent of machine produced goods, many of our traditional artisans have had to face intense competition from growing industrial sector.

Rural economic development is key to the development of the North East region as more than 80% of the population lives in rural areas and their livelihood depends on the distribution of economic activities. An average of 80% of the total income of artisans comes from the handicraft sector. This sector provides more than 90% of the livelihoods to approximately 61% of all crafts in the region. The region has a rich culture of handicrafts, which includes weaving textiles, cane and thread crafts, carpentry, jewelry, carpet making, carved wooden vessels, and handicrafts (Ministry of Textile, 2010). Table no.01 shows identified crafts available in the north-eastern region of India.

Table 1. Identified handicrafts found in the north-eastern region.

SN	State	Identified Handicraft
1	Arunachal Pradesh	Cane and bamboo, handloom and handicrafts, painting, carpetmaking
2	Assam	Tea, polyester yarn, jute, silk, handlooms and handicrafts
3	Manipur	Food products, hosiery, textiles, wood, paper and printing, leather, rubber, plastic, non-metallic mineral, transport parts, cane and bamboo
4	Meghalaya	Wooden furniture, cement, leather, stone, tailoring, lime - making, bakery, printing, cane and bamboo works, handlooms, handicrafts
5	Mizoram	Bamboo, handloom and handicrafts
6	Nagaland	Silk and fabrics, handicrafts
7	Sikkim	Wool and silk handlooms, handicrafts, food processing, tea etc.
8	Tripura	Tea, food processing, handloom and handicrafts, rubber and bamboo

Source: State department of industry, commerce and textile report

3. METHODOLOGY

To understand the craft scene in the city, a primary survey along with literature studies have been conducted. Open-ended interviews with various stakeholders, including the

craftsmen community, were conducted to get primary data. Collected data were analyzed on a qualitative basis to highlight ordinary/ distinguished issues. Moreover, several field visits followed by photography and videography were used for thorough documentation to understand the ground-level scenario. To get the information from secondary sources, various relevant government/ private agencies reports and research papers in similar research directions were studied and analyzed.
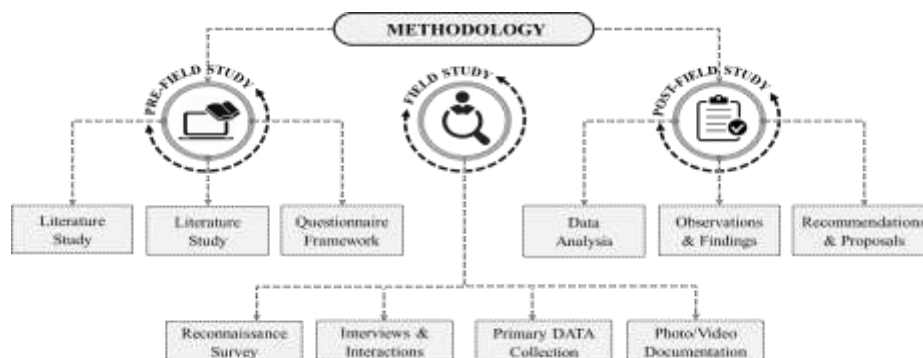
Figure 1. Flowchart of research methodology.

(Source: Author)

4. OBSERVATION AND ANALYSIS

4.1 Socio-Cultural Significance of Craftsmanship Around Ghats

Art is significantly recognized within the entire city. The Ashoka pillar from Sarnath, terracotta sculptures, the Buddha stupa are some of the uncovered artifacts within the city. In the chronological age, Banaras has been represented as a museum of Indian tradition with rich culture. Various wall paintings, murals, graffiti, and other artistic elements are found throughout the city. Art & craft have played a significant role in the city for ages (Baral et al., 2018). The geographical location of Banaras city with regional setting is illustrated in figure no. 1.
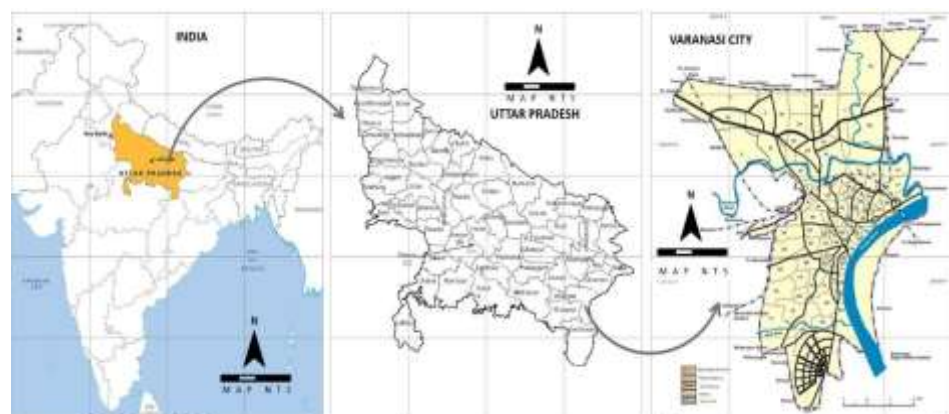
Figure 2. Geographical location and context of the city.

(Source: Author, http://ejournal9.com/journals_n/1518175833.pdf)

Table 2. Listing of crafts available in-and-around the city.

SN	Craft	Material
1.	Banarasi Saree	Silk
2.	Gulabi Meenakari	Gold, silver, semi-precious stones
3.	Clay and Terracotta Works	Clay
4.	Metal bell and Repousse	Brass, Silver
5.	Bamboo Baskets	Bamboo and wild reeds
6.	Carpets and durries	Jute, linen, silk etc.
7.	Glass Beads	Semi-precious stones, silica
8.	Stone carvings	Chunar sandstone
9.	Wooden Toys	Forest wood
10.	Zardozi Badge	Gold and silver

Source: Data collected by the author based on primary/secondary surveys and interviews of craftsmen.

The name Banaras itself is associated with the famous Banarasi Silk Sarees. Saree weaving was endorsed by the Gujarati silk weaver community in the city. The Banarasi silk saree is a living and thriving piece of history. Currently, around forty thousand active weavers (along with dealers, dyers, designers, and supplementary support providers) are found in the city who have been involved in the handloom cottage industry for ages. Weavers in the city are experts in doing typical Varanasi Zardozi embroidery. Banarasi silk is very famous worldwide and has gained demand in the international market. Meenakari is an art of ornamenting the designed metal articles. In the Meenakari process, the base is made of metal is engraved in bright colour enamels to set in place, later it is kept inside the furnace for fusing and hardening the meena. Enamel colours are metal oxides mixed with chemicals with colour contents of powdered glass, where the shades are influenced by the content of oxide (Baral et al., 2018). Pottery making has been seen in the Bhatti village in Varanasi. Clay and terracotta pots are made over a sniping base. The clay is molded with hands in pots, dried under the sun, and baked later on. Potters in the city are also involved in creating different gods and deities from clay and terracotta. Repousse is a metal sheet with ornamental engraving to showcase a design pattern on it. This craft is one of the traditional crafts found in floral motifs on utensils, masks for gods and goddesses, ornamental doors, and most of all temple accessories (Baral et al., 2018). Carpets and durries of Banaras are well-known universally. They are of high quality and are mostly exported in the global market. A vertical loom is used for knotting with wool and silk yarns. The Persian and Tibetan forms are used in making knots. The multiple processes used in the manufacturing of carpets are spinning, dyeing, designing, and weaving. This craft was introduced at the time of the Mughals primarily for their prayers. Wooden Lac and Turnery are some of the crafts used in the Hindu weddings in Varanasi. The grooms apply vermillion powder to the bride's forehead in the middle from the traditional Sindora. Eucalyptus wood is used to make Sindora by lac turnery process. The wood carving process is also famous in the city for its extraordinary and unique minute details. Neat carving could be seen in tiny mythological characters, animals, gods made of wood. These artifacts look so fancy to display in a cabinet. The ASI (Archaeological Survey of India) listed heritage conservation for around 20 heritage sites in the city. Apart from ASI monuments, the city is having a listing of about 300 important monuments in its various parts. The tangible heritage includes 84

river Ghats, more than 3500 religious' structures, Sarnath and Banaras Hindu University. The intangible heritage includes the cultural heritage of various artists. This tangible infrastructure and geography were a house for the flourishing of the arts and crafts in town. The town's strategic location plays a significant part in promoting the craft, providing raw materials, and a flourished market. Very few of which tangible remains are what we have today. INTACH had created a list of more than 1700 heritage structures in the city. Benaras is the second most visited tourist city in the state of Uttar Pradesh. Tourism experienced annual growth of 6.3% per year. Within the city, the accommodation facilities for the tourists are inadequate.

4.2 Socio-Economic Significance of Craft Community

The handicraft industry generally runs in small and cottage-based manufacturing units with a tremendous extent from generation to generation (Mohi-ud-din et al., 2014). These marginalized communities of artisans are located as different craft-based locations in town. Depending on the availability of craft markets and raw products, these art communities are located at different strategic locations in town. This internal localized crafts association between the communities forms a holistic framework of its sustenance, survival, and interdependency (Banik, 2017). Handicraft production acts as a barrier for out-migration and reduces loop-sided movement of people towards large human settlements. Localised availability of good markets in the nearby area of town strategically supports in maintaining the community balance. Tough, now much shift can be observed with the introduction of digital markets and other technologies and possibilities in and around. Also, the development pressure on the town has brought the same deviation in the sustainable goal of the communities. Mostly the rural artisans in the city are belonged from an unorganized sector. These informal sectors can be considered as the nerves and veins of the craft industry in town. They provide goods, labor, and raw materials to the craft communities. These informal sectors are broadly located in and around the craft communities; few marginalised settlements are located in the outskirts of the city hinterland. These sectors are mainly the laborers, flower pickers, sample cutters, stone pickers for making colour and dying etc. Most of the carpet weavers are identified as farmers.

Figure 3. Year-wise export data of Indian handicraft. (Export Promotion Council for Handicrafts- EPCH)

(Source: https://epch.in/index.php?option=com_content&view=article&id=76&Itemid=182)

The craft industry has created a positive effect on the social and economic well-being of certain rural communities. Today, the Indian craft sector has a poor ecosystem through which the sustainable craft process has become difficult. Artisans are getting low earnings from their traditional occupation. Due to low wages, old workers are not much interested in continuing their traditional occupation. The delirium of the

126

craftsmen community is inevitable, and most of them are living in substandard conditions. Most of them live in houses which are 80 years and old with lack of sanitation and electricity. With the lack of money, few artisans are not able to maintain their traditional housing. Houses are seen in dilapidated conditions. Individual weavers are often exploited by other traders due to lack of proper awareness amongst their community. Artisans are majorly recognised as males of the community, while women could never gain that notable status. Even though they continue to be informally employed in this craft and contribute to their artwork, they are never recognized as main workers even though they work for seven to eight hours a day. The scenario identified here is that an average male weaver earns for the work depending on his production, but a female weaver in the same field earns one-third of a male counterpart. Women are generally involved in finishing works. Women are also deprived of various health benefits and suffer from health issues. Women are often underweight, anemic, have weak eyesight's and often keeping their health problems to themselves due to financial problems. Children are often employed for several groundworks, including pattern making. Children help artisans in various small jobs to accelerate craft production. Artisans and their families suffer from a range of health problems. As most of their workplaces are situated in a house where there is no adequate light and ventilation, which results in these artisans being afflicted by various unhygienic diseases. The health hazards associated with low wages and lack of social security measures prevent new workers from joining the industry. After the pandemic situation, the fate of such cottage industries is setting like the evening sun. High cost with lack of access to raw materials for the work has forced the artisans to produce cheap products in their backyards.

4.3 Case-study of potter's community at Kumbharpura, Varanasi

Pottery is an ethnic form of art that is made use of all over the country for various purposes. Pottery making is also referred to as traditional craftsmanship (Indian Crafts, 2015). In this case, individuals are supposed to use tools, equipment, and skills to generate productivity. The pots are painted and decorated in order to provide them an attractive look. In order to understand ground reality, a deep case study has been conducted of potter's community at Kumharpura within the city.

Figure 4. Map showing delineated area of potter's community at Kumbharpura, Varanasi.
(Source: Drawn by author)

The study area has been identified as Kumharpura locality in the city. Major Historic built component at the study area is Temple, Kund, Dharamshala, and Traditional Vernacular Houses. The major heritage component is dated from the 16th to 20th century. Site majorly got inhabited and developed after the development of Dharamshala in the 18th-19th century. Major Historic vernacular residences belong to the local community. These vernacular houses can be categorised into two types depending upon their material of construction. One typology is identified as Kuccha Houses. These hoses are houses of the local Prajapati community at Kumharpara. These are houses of potters and built-in mud/adobe. These mud houses are generation houses average 2-3 generations back. Prajapatis are a traditional potter community; they bought significant resources for their pottery, i.e., mud from the bed of the local water bodies/pokhars. These water structures are an important source of their raw material, which regulates their livelihood. These potters supply all tools and utensils that are used in the temple for temple rituals and activities. Another typology has been identified as Pucca Houses. Pucca houses are permanent houses of brahmins and majorly Yadav and Gujjars. These houses are built in baked lakhori brick and walls cladded with chunnar sandstone. The number of these pukka houses is very less. Only three such houses can be seen at the site. those are in really poor condition.

Figure 5. A set of photographs during photo documentation of potter's community. Women workers are seen working in their household manufacturing units.

(Source: Primary survey, author)

Figure 6. Map showing open spaces in potter's community at Kumbharpura, Varanasi.

(Source: Drawn by author)

Open Spaces are a vital attribute of the site. The site's surroundings and temple ritual and activity are directly associated with the open spaces around the temple and temple precinct. This open space around is used by locals from daily day-to-day activity and these spaces are used as temporary pilgrim stay during panchkroshi yatra. These Open spaces are essential for the flow of natural water systems, which maintains the ecological balance at the site. Building up at these public open spaces blocks the streamlined flow, which leads to the local flood condition. Also, building upon these lowline catchment areas leads to the raise in dampness in the foundation of these houses.

Restoration strategies/guidelines for the Traditional Vernacular Houses need to be looked out to revive the quality of life of community/residents from the derelict condition of vernacular houses. Provision of Health, Education, and Physical Infrastructure including the efficient system of solid waste management, should be framed to prohibit Garbage disposal in community open space. There is a potential for occupational opportunities in the potter's community, which needs a to take on a positive approach.

5. RESULTS AND DISCUSSION

5.1 Role of Technology in Present Age

Technology plays an ideal role in improving quality, productivity and acceptability. Most Indian artisans use decade-old technologies to manufacture the crafts, which take much longer (Ghouse, 2012). The craft products to be produced in mass need mechanical support for further processing and finishing to save artisans time and energy. With the help of technology, bulk production with similar prototypes in the same size, shape, and design could be created within very little time, leading to better productivity. Manual carving and molding are very slow and time taking processes. Lathe machines are a better option to get molding and carving in wood. The use of technology in craft making is the need of the modern age, but on the other hand, the art of weaving Banarasi Saree is slowly losing its authenticity. The old style of weaving is now getting replaced by new cheaper products. The new techniques are time efficient undoubtedly, but still, they are making the product less authentic. The purity of silk has seen a drawback because of cheaper imported material from china (Panigrahi, 2017). A good handloom takes a month of work for the final product, but a machine does the job in a couple of days. Banarasi Sari has now been exported in the global expos are held across the world. Banarasi Sarees are mostly worn in festive seasons and weddings. Globalization has affected the whole economy and traditional cottage industries.

5.2 Institutional Support and Need-Based Interventions for Craft Communities

The existing institutional support and policy framework for the handicraft sector should be reframed or modified. Some craftsmen work in isolation or individual families, making it almost impossible to influence any government policy (Kathuria et al 1988). The Government of India has launched NHDP (National Handicraft Development Programme) to promote India's handicrafts (Ministry of Textile, 2015). Under this program, various schemes are framed to provide institutional support to artisans. There are few schemes as below:

- Babasaheb Ambedkar Hastshilpa Vikas Yojana

- ☐ Design and Technical Upgradation Scheme

- ☐ Marketing & Support Services

- ☐ Research & Development

- ☐ Handicrafts Artisans Comprehensive Welfare

These schemes are framed to promote Indian handicrafts by expanding artisan clusters into well-managed self-sustainable community enterprises. arious schemes are framed in PPP mode to build infrastructure support. They are provided skill development training through new design and assistance of modern equipment. Textiles clusters are identified as a center for excellence with well-integrated forward and backward linkages. Life insurance protection is provided to craftsmen between the age group of 18-60 years through comprehensive welfare schemes. V Community empowerment and technology up-gradation are mandate initiatives that could be worked out in order to artisan's welfare. To improve occupational efficiency, craftsmen communities should provide work-shed–cum-housing (Ghouse, 2012).

6. CONCLUSION

There is a rich tradition of excellence in arts and crafts in India with a vast scope in developing supply-chain. India has high employment potentials with a large skilled and unskilled workforce base, but we need to improve unorganised marketing by providing adequate market information to them. Infrastructural deficiencies need to be improved. We have a better existing international presence in terms of exportation, but on the other hand, increased competition among indigenous suppliers leads to price wars. Each craft, small or large, should get equal recognition and attention for welfare.

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Conflict

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The Impression of COVID-19 Pandemic on the Indian Handicraft: A Study

Saini Barkha & Gurcharan Singh

Abstract

Indian handicrafts are the heritance of value, mastery and skills; passed through generations since time immemorial. The horizon of crafts in India praises many colours and shades of our history, culture and religion. Indian handicrafts have been cherished and honored globally because of its diversity and excellent artistry. After agriculture, the artisans and craftsmen serves a large number of workforce in India. Traditional art and craft have been an elemental part of day to day life in India. Several countrymen still make their living through their creative craft items. However the fast-moving lifestyle, industrialization and modernization are some factors leading to the extinction of some craft and art forms. The current covid-19 pandemic and its halt of the economy was another such factor that had a disastrous impact on Indian artisans. It harshly troubled and affected the livelihoods of Indian craftsmen. In these challenging times many non-profit organizations such as Dastkari Haat Samiti, The Crafts Council of India, and Paramparik Karigar etc. promoted the craftspeople. Many of them raised funds for the artisans and their community so that they can continue to create their art and keep our traditional heritage alive. Since the artisans and craftsmen are the cultural identity of our nation these non-profit organizations created awareness to raise social appreciation and cultural significance of Indian craft. Thus the presented paper aims to bring forward the creative outpourings of Indian artisans during Covid-19 lockdown. Since art is an asset that enables us to record events, this research introduces how the craft world played their part in documenting this Covid-19 event. For instance, Amit Dhombare portrays the world under lockdown in traditional Warli art form and similarly Pattachitra artist Apindra Swain utilizes this pandemic situation to document classical illustrations with additional detail of pandemic. Ambika Devi, a Madhubani artist used her traditional art form to portray the Covid codes of conduct such as wearing masks, sanitising hands and maintaining social distance. D. Veikuntam documented the whole pandemic scenario in Cheril scroll painting. Dwarika Prasad uses Kavad art- a 400 year old colorful storytelling form of art, to portray scenes of hospital. Many such other artisans shared their part in recording the Covid-19 outbreak in their respective traditional art forms. The pandemic mode has been beautifully mirrored by Indian Craftsmen, driving a ray of hope in our lives. Thus, for the research, observations (e.g. art and craft presentations) and qualitative study method has been used. Craft forms of Warli, Pattachitra, Madhubani, Cheril scroll, etc. reporting Covid-19 events were collected from various online and offline craft platforms. The research favorably traces the artistic themes of isolation, fear and hope recorded by artisans in their respective traditional art form. It also addresses some non-profit organizations for their timely support and contribution. The research provides an enhanced appreciation of creative perspectives of the current pandemic by Indian artisans. It also provides knowledge of what sort of art is created by merging traditional and contemporary forms and what purpose the crafts served during these vulnerable times.

Keywords: India, craft, handicraft, artisans, COVID-19, pandemic

The Impression of Covid-19 Pandemic on Indian Handicrafts: A study

The time-honored classical objects, crafted and designed by skilled use of our hands are known as 'Handicrafts'. Handicrafts have evolved through centuries and symbolize our cultural and religious traditions. (Tyagi, 2008) Though purely beautifying and decorative the objects are an impression of diverse occasions such as cultural festivals, worshipping deities and natural forces, to celebrate birth, puberty, marriage and harvests. (Gupta, 2008) Handicrafts can be identified under these three main types' viz. Folk crafts, Religious crafts and commercial crafts. Folk crafts are family oriented objects that serve cultural and traditional values of a particular social group. Religious crafts are influenced by religion, whereas commercial crafts are created by skilled craftsmen and made available for sole and retail sale. (Tyagi, 2008) Similar to the cultural diversity, India is a land of rich and diverse handicrafts. Indian crafts have travelled thousands of years carrying religious faith, native use, fulfilling the desires of royalty, and serving foreign and internal trade markets. (Handmade in India, 2009) Exemplary works of pottery, jewelry, stone, and metal sculptures are evident in Indus valley civilization. Then Vedic age observes an admirable art of weaving. The craft tradition reached its peak in Mauryan Empire. It excelled in stone carving and acquired supremacy in metallurgy. Next medieval India saw compelling growth in handicrafts. Notable contributions are the bronze sculptures by Cholas and the stone carvings by Chandelas. Further under the patronage of Mughal Emperor- Akbar, Shahjahan, and Jehangir, Indian handicrafts attained perfection, and textiles, carpet weaving, jewellery making etc flourished. With the evolution of princely states and the decline of the Mughal Empire, local handicrafts last patronage. With the arrival of the East India Company, Indian markets rushed with industrial items. Craftsmen had to struggle for livelihood and thus turned up to other professions. The industrial revolution and imposition of heavy taxes on Indian goods led to the decline of local crafts. (Social science, 1968) In spite of various challenges and adversities, Indian handicrafts have managed to survive to date.

As we all are aware a global pandemic is underway and it is affecting millions worldwide. The coronavirus disease which emerged in Wuhan, China in December 2019 spread throughout the world. (World Health Organisation, 2020) Millions of people lost employment or have been majorly affected. The handloom and handicraft sector of India provide service to more than 20 million people, placing itself as second-biggest sector, next to agriculture. Though handicrafts are beautiful and are the inheritance of value and skills, they are considered as non-essential optional objects. Due to this reason it was one of the worst striked sector in these dark times. (Tanwani, 2021) The Indian handicraft and handloom sector is dominantly based on daily wage earners, leading to immense damage to the sector. There have been a significant number of pandemics throughout history and they have been documented in the form of human experiences through art. Self-religiocification, adoration of icons, the process of dying, depiction medical symptoms and iconography creations can be observed in the artworks. (Mattes, 2021) 'The Dance of Death' by Giacomo Borlone de Burchis and 'The Triumph of Death' by Pieter Bruegel are notable artworks that recorded the pandemics of past. Art is an asset that enables us to record significant events and contemporary Indian artists have contributed very well in documenting the current Covid pandemic. Artists such as Dhruvi Acharya, Jatin Das, Kavita Nair, Abir Karmakar and many more portrayed the pandemic scenario in several ways. There is a

streak of optimism, hope and compassion, fear and fright, plight of the migrants, new normal life and even anxiety in the paintings.

Similarly responding to the current scenario, Indian folk artists were also interpreting the pandemic according to their culture and tradition. In Orissa, Patachitra scrolls show beautifully dressed women in masks, washing their hands; in Maharashtra health care workers vanquish coronavirus breathing Warli Dragons and in Rajasthan Phad paintings help explain social distancing to local villagers. Cheriyal scroll of Telangana, Patua scroll and Sanjhi of Uttar Pradesh appeared with a new combination of local tradition and contemporary thoughts. Current pandemic scenes of day to day lives replaced the traditional mythological themes for a period of time. Apart from the idea of documenting Covid pandemic, Indian craftsmen needed support, upliftment and medium to reach right audience and gathering. To mitigate the loss of craft communities and creative individuals, organisations such as Dastkari Haat Samiti, The Crafts Council of India, Delhi Crafts Council, Paramparik Karigar and many more came forward as a helping hand. These organizations made efforts to continue the work of their employed artisans, provided them alternate digital sources and maintained fundamental activities with least available resources. Thus the present paper aims to showcase Indian traditional art forms working during the crisis. It intends to understand the various subjective experiences and perspectives of individual folk artists or artisans.

Pandemic and Indian Crafts: A Contemporary Scenario

Since past two decades certain Indian folk artists and traditional craftsmen have extended the inherited margins of their art practice to delve into new potentials proposed by the contemporary situations. They have unfolded certain formal changes which conquer the essence of prevailing visual culture and tradition in fresh and recent form. Also the traditional artisans now have become familiar with the urban market demands. They have started designing art and craft beyond the mythological and religious themes and now create according to pace in contemporary thoughts and subjects. The current Covid pandemic was one such harsh and disastrous event that compelled the folk artists of India to record it in their traditional style. Since storytelling is one of the most important components of folk art, the artworks created in these times are rich in new Covid forms and represent the situation in traditional but creative way. A wide range of theme and ideas flourished in the works of artists and craftsmen; from fear to hope, depression to cheerfulness, and new Covid codes of conduct were portrayed. The present paper thus brings forward the depiction of COVID-19 pandemic by Indian traditional art form engaged with modernity.

Patachitra

'Patachitra' art is one of the earliest and well known form of art practiced mainly in Orissa and West Bengal. The term 'Pata' is the Sanskrit root which means cloth and 'Chitra' means picture. The art form is mainly based on the designs of the three deities-Sri Jagannath, Balbhadra and Subhadra. (Mohanty, 1984) It is a methodic art form and thus comes with fixed rules and regulations. Use of natural colours in single tone, floral border, clean and bold outlines, and well defined figurative posters are some of the firm elements of Patachitra. It lacks perspectives, distant views and landscapes. This ancient art of Patachitra has evolved materially and conceptually in order to meet the modern requirements. But the alterations never came in the way of customary

representation of figures and use of colors. Covid-19 was one of the new emerging elements in the art of contemporary Patachitra artists. The essential feature of 'Storytelling' intrinsic in Patachitra has favored modern artist to traverse the pandemic thoughts. Artist named Apindra Swain from Raghurajpur, Orissa illustrates mythological and folkloric figures wearing face masks. He briefly paints the Covid codes of conduct in traditional form. The tales have been illuminated with figures having long eyes, pointed nose, angular limbs and round bodies, enclosed within a floral border in vibrant colors. He often depicts humorous as well as charming scenes of love even in these disastrous times. Apindra also created decorative fiberglass tigers with Covid symbols painted in Patachitra style. This transition in his theme not only spread awareness but contributes in building hope to survive. One of his recent works promotes the use of vaccine. Through his paintings he tackles the stereotypes related to vaccine and illustrates doctors administering vaccine to the people. (Fig.1) Swarna Chitrakar from Medinipur, West Bengal painted an intricate seven frame scroll that has a detailed narration of chaos and destruction caused by the coronavirus. The painting portrays the global pain, people wearing masks, precautionary measures, medical professionals in PPE kits and a big demon in red representing the virus. Rani Chitrakar through her scroll painting predominantly questions God the reason of the current devastating times caused by the deadly virus. Through her paintings she creates awareness among the people and codes of conduct for safe life. Artist Anwar Chitrakar combined humor in his paintings accomplished in the style of Kalighat Patachitra. He portrayed the hopes and desires of the ordinary human whose lifestyle has been adversely influenced by COVID-19 pandemic. He even talks about the face mask that protects and also hides us. Even a familiar person is confusing and difficult to recognize. The mask is an aid for budding lovers in the suburbs, as they can slip away from their parents. (Singh, 2020; Emami Arts, 2020) Thus the artworks featured in Patachitra style by contemporary artists revealed their perception of current pandemic times.

Warli

Warli painting traces its origin in the Warli region of Maharashtra. This form of art primarily adopts geometric shapes like circle, squares and triangles to build various shapes depicting life and beliefs of the tribal people. It is primarily done with white pigment against brown background. Coiled chains of human around one central motif is one of the most prominent and beloved theme in Warli. (Prakash, 2002) Amit Dhombare and Anil Vangad are contemporary Warli painters who beautifully represented the human world locked under the Covid-19 pandemic. Artist Anil Vangad's paintings delve into science, religion and ordinary people trapped under the pandemic. He depicts a red dragon as a form of virus and the destruction caused by it to human life. He portrays churches, temples and religious symbols relating to unity against Covid crisis. There is an element of criticism for science directing that in spite of all the advancements there was no solution then. Artist Amit Dhombare in one of his paintings illustrates earth confined in chains and locked with a mask. (Fig.2) Similar to Mr. Vangad, Amit too paints symbols of religions and temples and mosques, merged with hospitals, ambulances and medical teams working nonstop. The central motif is a red sphere with demon horns omitting virus from mouth and is connected to human lungs, which indicates the invasion of virus in humans.

Madhubani

Madhubani painting one of the most honoured Indian art form is proficient in the Mithila region of Bihar and Nepal. Usually distinguished by complex geometric patterns, these paintings represent ritual essence for specific occasions, festivals and religious customs. The women of the villages practiced these paintings as a decorative element on the walls of their houses. They illustrate their desires, hope and impressions. (Madhubani art, 2015) Till today, the woman of the villages in Bihar use this form of art to express issues related to women. Ambika Devi is a contemporary Madhubani Artist and national award winner from Rashidpur village in Bihar. In her recent works she integrated the pandemic events of rural India in traditional Madhubani style. (Fig.3) Female figure dominantly occurs in her painting along with an element of storytelling. Focusing on the ongoing crisis she illustrates village market scenes with people supporting social distance and wearing face masks. Through her traditional art form she also pays tribute to doctors. She says that the doctors are the generous warriors who have devoted themselves for healthcare while staying away from their families. They are worthy of lifelong indebtness for the sacrifice they are making for the immunity and well being of mankind. Another Madhubani artist Remant Kumar Mishra recently came to be known as 'Mask man' of Bihar. He twisted the hardship into opportunities. Apart from visualising the Covid life in his paintings, he created masks that had Madhubani motifs on it.

Phad

Phad paintings are religious scroll paintings proficient in Rajasthan. It is traditionally done on a long piece of cloth called 'Phad'. It dominantly depicts narrations of the folk deities mainly of Pabuji and Devnarayan. (Phad paintings of Rajasthan, 2018) Contemporary veteran artist Kalyan Joshi is using this traditional style to raise alertness for the ongoing pandemic. Sticking to the traditional style and material, Kalyan Joshi recreates scrolls that narrate pandemic events. One of the fascinating works is a 41 scene Phad, that fragments the chaos caused by Covid-19 pandemic. (Fig.4) This marvelous work unwinds from the initial stage of virus detected in Wuhan, China and how it spread globally. A Green Dragon is depicted spewing virus all over the world. Small miniature narrations are episodes from airport, hospitals and healthcare workers administering Corona patients. There are scenes of gratitude for frontline workers, people banging plate, lighting diyas, clapping hands, as it was advised by Prime Minister Shri Narendra Modi. Kalyan Joshi added an element of text describing each seen to this style for better understanding of the people. The scroll illuminates happy and positive events of home, people spending time with families, some coming after their hobbies, individuals doing the jobs online and much more. A few scenes of helping hands and feeding animals were painted as a recommendation to help others in crisis. (Bhuyan, 2021) Kalyan Joshi painted a similar Phad painting titled 'Migration in the time of Corona'; this particular work with numerous panels and text illustrates the plight of migrant workers who undertook hard and back-breaking journeys to return to their hometown.

Cheriyal

Cheriyal scroll painting is a conventionalized form of Nakashi art, intense in local motifs, distinctive of Telangana. The scrolls are painted in a narrative composition describing stories from Indian mythology as well as events of day to day life. Scroll

paintings can be quickly acknowledged due to certain characteristics such as the use of expressive colours mainly primary colours with domination of red in the background. Andhra culture can be perceived in the depiction of figures and their costumes. D Vaikuntam and his family are probably the only people of Cheriyal in Telangana, who have carried on this traditional art form till today. They are keepers of Nakashi, continuing to paint pictures to narrate stories. These Nakashi artists took up exclusive ways to revive and reinvent their art and keep it applicable to newer contemporary forms. D Vaikuntam and Vinay Kumar painted Covid cityscapes in Cheriyal scroll which is remarkable for its element of storytelling. Holding the traditional elements such as red colour spread in background, painting trees for creating portions and adopting mainly primary colours; the scroll narrates every possible events that emerged during the pandemic. The painting depicts hospitals, men sanitising roads and houses, people wearing mask and maintaining social distance in city and villages, doctors working round the clock for the safety of patients, cops inspecting people, migrants heading towards their home and families spending time together playing games and other activities. Overall it was a flawless and impeccable narration of Covid-19 pandemic in the form of a traditional art. (Fig.5)

Apart from the traditional art forms mentioned above, there were numerous other folk artists, who with the use of their creative handicrafts and paintings contributed their part in documenting the current reality of the pandemic in their respective art styles. In Rajasthan there is a 400 years old colourful storytelling form of art known as 'Kavad' art. Wooden panels that are similar to storyboards are painted and decorated by artists that bear messages. One such Kavad panel portraying scenes of hospital and medicating Covid-19 patients was painted by Dwarika Prasad, an artist from Chittorgarh district. Tulsidas Nimbark from Rajasthan was a miniature artist and through his painting entitled 'Bhagwan se Prathna' conveys that in the time of crisis only God will give us the strength to fight the pandemic. Mohan Kumar Verma practices 'Sanjhi' a traditional art form of Mathura, Uttar Pradesh. He depicts Krishna defeating theVirus. Similarly Sneh Gangal employs Kangra miniature, the pictorial art form of Himachal Pradesh, to characterise the contemporary crisis. She too illustrates Krishna defeating the virus. Sneh Gangal adorns Lord Krishna with mask, sanitizer and disinfecting machine rather than his traditional ornaments. Gond artist Mahesh Shyam and Venkat Shyam have painted a dramatic version of the Gond art style. They have depicted virus dominating the world and people falling apart. Thus it can be said that the pandemic has left its mark on Indian traditional art forms. In addition to traditional paintings, artist and craftsmen created and decorated materials such as masks, sanitising bottles, key chains, notebooks and many such items of home décor inscribed with motifs of their respective art form. These diverse medium of handicrafts were put up for sale with reasonable prices through online platforms. Non-profit organisations such as Dastkari Haat Samiti, Crafts council of India, Delhi crafts council, Paramparik Karigar etc. were working constantly to provide assistance to the artisans and help them meet the right audience.

Conclusion

The research presented here unfolds the traditional art forms that portrayed the coexistence of art and pandemic. In India religion features prominently and thus the traditional art forms narrating the pandemic stories served as a tool for knowledge proclamation and proved to be boon in bridging the gap between public health and

social beliefs. In addition the folk artists expressed their inner perception of the Covid-19 crisis and the physical and mental conditions due to isolation. Some artist practiced it as a form of healing stress, while some painted the situation in a satirical way. Almost every unfamiliar situations brought by the pandemic has been documented by the various traditional art styles. From plight of the unprivileged people, rise of violence, anxiety, depression and fear to the new normal elements such as masks, habit of sanitation and social distancing have been narrated briefly. Some works had an element of appreciation for the medical teams and other frontline warriors. Thus the creative traditional paintings and handicrafts by various artists proved that the art has the power to uplift, bring about a change and influence. There are countless works and handicrafts that are still contributing to this pandemic. Although the medium, interpretation and approach differ; there is something common in the works of each artist and that is 'motive'. In spite of misfortune and human casualties there is hope. In these dark times of distrust and resistance the craftsmen and artists have made efforts that exhibit human spirit. Apart from documenting the pandemic, these works played role in making people understand the set of circumstances that all were going through. Many brilliant works related to the pandemic created by various artists in their respective traditional art style from all over the country still remains. The study successfully presented the images of Covid-19 pandemic documented by Indian traditional art and will be recalled in the coming generation. The study provided knowledge of what sort of art is created during pandemic and what purpose art serves during these times. I hope my efforts brought positivity through the various artworks shared in the paper.

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Figures

Figure 1
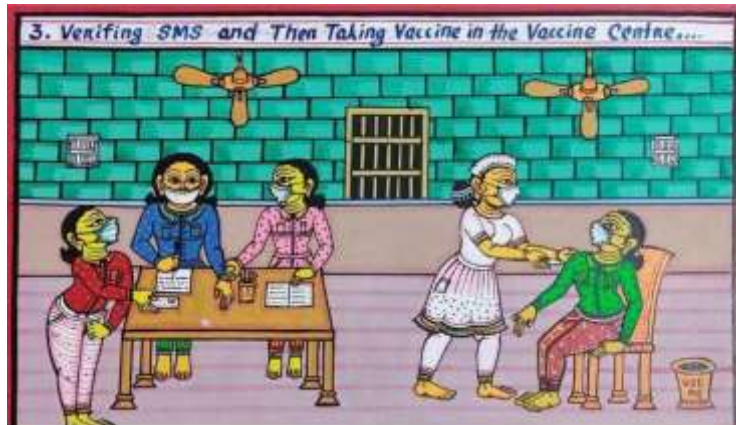
Note. Patachitra painting by Apindra Swain motivating people to get vaccinated. https://www.instagram.com/p/CQ0zsbkBGC3/

Figure 2

Note. Warli painting by Amit Dhombare depicting world locked under Covid-19, https://www.instagram.com/p/B_UliCtpA6X/

Figure 3

Note. Madhubani painting by Ambika Devi depicting Covid codes,
https://www.tribuneindia.com/news/arts/how-folk-artists-respond-to-a-pandemic-89282

Figure 4

Note. 41- scene Phad painting by Kalyan Joshi that narrates pandemic events,
https://en.gaonconnection.com/a-veteran-artist-is-using-traditional-phad-paintings-to-raise-awareness-on-covid-19-in-rajasthan/

Figure 5

Note. Cheriyal scroll painting by D. Veikuntam depicting covid cityscape
https://www.instagram.com/p/CAM8ViiJJ0Q/

Lithography Art in Colonial India and the Influence of Contemporary Social Demography on Gagnendranath Tagore's Litho Prints

Gayatri Panda

ABSTRACT

The term "Litho" means "stone" and "graphy" means "writing". So, the word "Lithography" literally means "Writing or drawing on stone". Lithography is one of the most popular and widely used traditional printmaking techniques. This technique of printmaking was invented in 1798 by Alois Senefelder in Germany.[1]

This paper discusses the development of Lithography as art during British Rule in India and discusses how the contemporary Litho Prints were influenced by the contemporary social demography and impacted the works of prominent painter Gaganendranath Tagore who was a Litho Artist of the early 20th century of Bengal school of Arts. Lithography was earlier used more as a tool for business processes by Portuguese and the British and then as a tool for Christian Missionaries for their agenda of propagating Christianity in India and later it was developed as a medium of Artistic impression and innovation over course of time in India which also impacted Indian artists such as Nandalal Bose (1882-1966), Surendranath Kar (1892-1970), Benodebehari Mukherjee (1904-1980) and Gagendranath Tagore (1867-1938). But soon, Lithography began to be used by Indian artists as a tool for social awakening and bringing nationalism feeling in people. Gaganendranath Tagore started using Lithography as a tool for social awakening through his prints and highlighted these social or national issues in his artworks in satirical ways. His artwork was mainly influenced by British Imperialism, the introduction of Western culture, the Caste system, and other contemporary social or national issues prevailing during his time.

Keywords: Lithography, Gaganendranath Tagore, Printmaking, Social Issue, British India

Introduction

Social Demography on Gaganendranath Tagore's Litho Prints

The art of Printmaking was primarily introduced in India by the Portuguese Christian missionaries in Goa after they established businesses in India through Calicut, Cochin, and Goa in the early 16th century.[2] Printmaking has evolved through the ages. After the invention of Lithography in 1798, it was only by the late 19th century and the early 20th century that Printmaking (Lithography) as distinct from printing began to emerge in India. During this time, Printmaking was started to be used as a creative medium, but the printing activities among artists were very limited till the 1950s. In the nineteenth century, lithography was widely used and popularized by the British.

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[1] Anna Trojanowska. History of lithography. p.2. https://litografia.pl/en/authors/, accessed on 3rd December 2020

[2] Aarthi Padmanabhan, (03 June 2018), 'History of Printing in India', pp- 4,1. India Documents. https://fdocuments.in/document/history-of-printing-in-india.html, accessed on 27th January, 2021

Asiatic Lithographic Press was established in Calcutta in 1825.[1] Indian artists such as Jayram Das, Raja Ravi Varma started to learn the technique of Lithography, which was totally unknown to them earlier. Later, in the 1890s, Raja Ravi Varma started his own Lithography Press. Gaganendranath along with his two brothers Abanindranath and Samarendranath established the 'Bichitra Club' in Calcutta in 1915.[2] The aim was to bind together attempts of exploring different and new styles of painting and printmaking into one organization.

Nandalal Bose introduced Printmaking in Shantiniketan (Kala Bhavan) in 1921. Benodebehari Mukherjee and Ramkinkar Baij also experimented with this medium in Kala Bhavan in 1930s.

After this medium of printmaking started to be used as an Artistic Impression, artists like Gaganendranath Tagore worked primarily on the social issues prevailing in colonial India. During colonial India, Indian society was full of social evils such as caste system, superstitions, untouchability, etc. Also, there was the influence of Western culture and the rise of Nationalism and social awakening in the society. Gaganendranath tried to show all these social issues and characteristics through his Litho Prints in a satirical manner.

About Lithography

Lithography Process-

Lithography is a planographic printing process. It uses highly polished and flat limestone. It basically works on the fundamental principle of the immiscibility of water and oil(grease). Before using the lithography stone, it is grained first to remove the earlier drawn image (or grease if any) and make it ready to be used. The graining process removes the chemically processed top layer from the stone. Firstly, the stone is thoroughly scrubbed using oil patch cleaner, and then coarse, medium, or fine grades of carborundum grit are sprinkled over the stone and is rub over by another small litho stone in a figure of eight motion. After the stone is grained, we draw the image over the stone using greased materials such as Lithographic crayons, rubbing blocks, tusche, etc. French chalk is sprinkled over the stone to protect the image during processing. Gum Arabic mixed with a small amount of nitric acid is applied over the stone evenly using a sponge. The Gum chemically separates the image and non-image area so that the greasy image area becomes hydrophobic and the rest of the area becomes hydrophilic. Nitric acid stops the grease from spreading on the stone. This process is also referred to as etching. It is usually etched twice and then the stone is left overnight to chemically change the stone to establish an image within it. The stone is then re-gummed using plain gum, buffed down to a thin layer, and dried. Turpentine is used then to dissolve and remove the greasy drawing materials and excess turpentine is wiped off with a cloth. Using a roller, non-drying black ink is then rolled onto the stone until the image is clearly visible. The stone is again dried, dusted with French chalk,

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[1] Dr. Sunil Kumar, (2000), 'Bhartiya Chapachitra Kala: Aadi se adhunik kaal tak', Delhi, India: Bharatiya Kala Prakashan. P. 57.

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and is etched again. The stone is left to rest for a few hours before the final prints are taken.

Finally, the stone is washed out and rolled up again (etched again and washed off). Greasy printing ink is rolled using a roller and then a few proofs are taken on newsprint and later final prints are taken on the damp paper by rolling over the paper laid over the stone.

Invention of Lithography

Lithography was invented by **Alois Senefelder** in Germany. Alois was a talented actor and play writer. Alois wanted to earn a fortune selling his plays but the printing costs were too high for him to afford to publish them. He needed cheap and quick publishing of his plays and this provoked his invention. The publishers were not interested to cooperate with him so he decided to publish his plays himself. At the very beginning, he wanted to copy his texts from copper, steel, and zinc slabs but the methods appeared too expensive. During printing on the copper slab, he used to mix the paints on a piece of stone he had found around his house. One day his mother asked him to note down the list of washings as they were running laundry services for their living. As he did not have any pen and paper, he noted the list down on the stone using the ink. Later on, when he tried to wash the list up it appeared that the drawing does not absorb water! He ran on the idea to etch the stone found around his house using nitric acid to publish his plays and this was the beginning of flat printing. After many experiments, he used gum Arabic dilution to protect non-printing surfaces against absorbing the paint. Alois traced the most important rules in lithography. "I took the perfectly polished stone. I made a soap drawing on it. I poured light gum Arabic dilution. Then I applied fat paint on the whole surface of the stone. The fat places were black, while the others stayed white." He patented the process and improved it during his life.[1]

Introduction and Development of Lithography in India during British India

In India, earlier Lithography was used mainly for commercial purposes and the printing activities in India were dominated by Europeans until the 1820s, but gradually it shifted towards Indian enterprises after the establishment of Lithographic presses in India.[2] During the nineteenth century, besides woodcuts and engravings lithography, was widely practiced and popularized by the British. In 1825, Asiatic Lithographic Press was established in Calcutta with help of James Nathaniel Rind.[3] Indian artists also learned the technique of Lithography, which was unknown to them. Jairam Das, a working artist learned Lithography techniques from Sir Charles D'Oyly in Patna during 1828. D'Oyly also organized an art society - 'The Behar School of Athens' during his stay at Patna. He imported a lithographic Plate from England and taught and

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[1] Anna Trojanowska, 'Aloys Senefelder - The inventor of lithography', https://litografia.pl/en/home-eng/, accessed on 10th December, 2020

[2] Amit Mukhopadhyay and Nirmalendu Das, (September 1985), 'Graphic Art in India: 1850 to 1950 (A Brief Background and History)': An Exhibition. India: The Akademi, New Delhi, p. 7.

[3] Dr. Sunil Kumar, (2000), 'Bhartiya Chapachitra Kala: Aadi se adhunik kaal tak'. Delhi, India: Bharatiya Kala Prakashan. P. 57.

worked with Jairam Das along with some other local artists.[1] A Lithography-based government press was established at Bombay in 1824 by Robert Mac Dowell, and a commercial press was also established there by John Morris in 1826.[2] After Calcutta, print and publishing were established in Kanpur and Lucknow around the 1820s. Most of the printing press established at that time was Lithography based. 'IBRAH's *A History of Bengal from the death of Sarfārāz Khān, A. H. 1151 to the death of Sirāj ul-Daulah* was the first book to be printed in Lithography in India and was issued in Banaras in 1824.[3] With the increasing popularity of graphic art in India, art schools were established in Madras (1853), Calcutta (1854), Bombay (1857), and later in Lahore (1878).[4] Till 1870, Lithography was mostly popular for publicizing printed pictures of the calendar, book, and other publications, and in the 1870s it slowly began to take the popularity for fine art prints as several art studios and printmaking presses flourished all over India after 1870.

Later, a renowned Indian artist Raja Ravi Verma was the first in India who used printmaking, not as an artist medium itself, but as a means for his art to reach the masses. He employed a German master lithographer in the 1890s and established his own litho press in 1894 known as the Ravi Varma Press in Ghatkopar, Bombay employing German inks. The first print of his press was of his own painting - '*The birth of Shakuntala*".[5] His work represented western-style but depicting Indian themes. Ravi Varma's main interest was in generating prints of the Hindu mythological characters such as Hindu gods, goddesses, and other mythological characters. He worked on both Oleography and Lithography.

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[1] J. W. Kaye, J. F. WATSON, M. Taylor. (1868-75). 'The People of India', A Series of Photographic Illustrations, with Descriptive Letterpress, of the Races and Tribes of Hindustan, (by Meadows Taylor,)... Edited by J.F. Watson and J.W. Kaye. (n.p.): London.

[2] Mr. Graham Shaw, Indira Gandhi National Centre for the Arts. para 6. http://ignca.gov.in/the-introduction-of-lithography-and-its-impact-on-book-design-in-india/, accessed on 7th February, 2021

[3] E.M.A. Edwards, (1922), A Catalogue of the Persian Printed Books in the British Museum, London British Museum, col. 281.

[4] Dr. Megha Madan, Prof (Dr) B S Chauhan. (2019), Printmaking as part of Art Education- in Context to Establishment of Printmaking Departments in India, International Conference on Multidisciplinary Research in Science, Engineering, Management, Education & Humanities, http://conferenceworld.in/. (ISBN-978-93-87793-83-5). p. 7.

[5] Raja Ravi Varma, Art for All Times, https://www.livehistoryindia.com/story/snapshort-histories/ravi-varma-art-for-all-times/, accessed on 3rd December, 2020

Figure 1- *"The Birth of Shakuntala"*, By Raja Ravi Verma, Medium- Lithograph on paper

Picture source: (https://artsandculture.google.com/asset/shakuntala-janm-birth-of-shakuntala-ravi-varma-press/4AFKnA_uuKTd4g?hl=en)

Figure 2- "Shakuntala Patralekhan", by Raja Ravi Verma, 1876, Medium- Lithograph on paper picture source:
(http://www.ravivarmaoleographs.com/links/saleimage/shakunta.jpg)

The rise in nationalist sentiments and the Swadeshi movement at the beginning of the twentieth century led to the revival of the status of Bengal Art. Gaganendranath Tagore was one of the most popular artists from the Bengal School of Arts. He worked on paintings as well as lithographic prints. He also worked on caricatures making and his caricatures were in watercolor and later he made them into lithographic prints. He

147

used to organize regular exhibitions to display his collections. Gaganendranath along with his two brothers Abanindranath and Samarendranath established the 'Bichitra Club' in Calcutta in 1915 at their Jorasanko residence. At this club, he used to teach and practice Painting, Printmaking, and the other art forms as well at one place.

'Kala Bhavan' was established at Shantiniketan by Ravindranath Tagore and it brought a new era in Indian art when artist Nandalal Bose took charge of Kala Bhavan. In 1921 Nandalal Bose introduced Printmaking to Kala Bhavan in Shantiniketan and it became very popular since then. Benodebehari Mukherjee and Ramkinkar Baij experimented with Lithography during the 1930s in Kala Bhavan. Surendranath Kar learned the techniques of Lithography from London in 1925 and imparted his knowledge to Ramendranath Chakravarty.[1] During this period Nandlal Bose, Ramendranath Chakravarty, Ramkinker Baij, and other artists of Kala Bhavan worked on a good number of Lithograph.

Figure 3- *"Jagai Madhai"* By Nandalal bose,1930, Medium- Lithograph on paper

Picture source: (https://www.mutualart.com/Artwork/Jagai-Madhai/)

Ramendranath was a great experimentalist. He aimed to build up a picturesque effect on the graphic surface, thus most of his prints became more painterly than graphic. This was the turning point for printmaking in India, as artists no longer related the

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[1] Amit Mukhopadhyay and Nirmalendu Das, September 1985, ' Graphic Art in India: 1850 to 1950 (A Brief Background and History): An Exhibition', India: The Akademi, New Delhi, p. 8

techniques with their reproductive values; instead, they were now more concerned with creating artworks.[1]

The earliest contemporary printmaking workshop in India – "The Society of Contemporary Artists of Calcutta" was formed in 1960 by some like-minded painters and sculptors – Somnath Hore, Ajit Chakravorty, Arun Bose, Deepak Banerjee, etc. This society helped Printmaking as a movement of Graphic Art.[2]

Before 1964, all the printed pictures for both commercial and fine art purposes were together titled 'Graphic art'. But with gradual developments and the increasing popularity of printing among artists, it became a vital necessity to coin a new term to distinguish between them. So, the Print Council of America, in 1964, restricted the definition of an original print and thus the term 'Printmaking' was generally accepted.[3] In the year 1967, graphics emerged as an independent stream for study in the course structure. Printmaking as a specialized course at the graduate level was introduced in India for the very first time.

In 1968, Somnath Hore joined Shantiniketan (Kala Bhavan) as the head of the Department of Graphic Arts and organized the first full-fledged Printmaking department. In the later years, many other new printmakers at Shantiniketan such as Sanat Kar, Lalu Prasad Shaw, Pulak Dutta, Nirmalendu Das, Ajit Seal, and Salil Sahani worked on a variety of media. Nirmalendu Das's Lithographs got popular during this time.

Bombay and Baroda can be described as synonymous with printmaking at its best in Western India. The print-making department at Bombay's Sir JJ School of Art was always very active and progressive, but after the arrival of JD Gondhalekar in the 1950s as Dean, it got a new momentum and direction. Baroda has always been at the forefront in the field of graphic arts in India. The Faculty of Fine Arts, M.S. University, Baroda was established in 1949-50 and was having the best-in-class printmaking departments in the country and with highly trained staff. The department was virtually set up by Jyoti Bhatt. Artists from all over the country used to go to Baroda for advanced training in different print media. Shanti Dave, Laxma Goud, Devraj, Gaurishankar, etc. experimented with various printmaking techniques here.

Vinod Ray Patel began with lino-cuts but his output in lithography is considerable. lithography was also popular among artists like Naina Dalal, Kishor Wala, and Megan Parmar.[4] DLN Reddy and Rini Dhumal were other significant Printmakers of this era at

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[1] Dr. Megha Madan, Prof (Dr) B S Chauhan. (2019), Printmaking as part of Art Education- in Context to Establishment of Printmaking Departments in India. International Conference on Multidisciplinary Research in Science, Engineering, Management, Education & Humanities. http://conferenceworld.in/, (ISBN-978-93-87793-83-5). p. 10.

[2] Pronobronion Ray, (September 1985), 'Graphic Art in India Since 1850: An Exhibition. India: Printmaking in Bengal: A Quick Survey', 45 The Lalit Kala Akademi, New Delhi. PP. 46-47.

[3] Amit Mukhopadhyay and Nirmalendu Das, (September 1985), 'Graphic Art in India Since 1850: An Exhibition', India: The Lalit Kala Akademi, New Delhi, p 5.

[4] Ratan Parimoo, (September 1985), 'Graphic Art in India Since 1850: An Exhibition', The Lalit Kala Akademi, New Delhi. pp. 24-26.

Baroda.[1] Nagpur, Pune, and Nasik are among other centers of Western India where facilities for training in printmaking exist to some extent but cannot attract talented artists in the absence of adequate staff and up-to-date equipments.[2]

Gaganendranath Tagore – Introduction

Gaganendranath Tagore belonged to the family of Rabindranath Tagore. Dwarkanath Tagore had two sons- Debendranath Tagore and Girinendranath Tagore. Rabindranath Tagore was the son of Debendranath Tagore while Gaganendranath Tagore was the grandson of Girindranath Tagore. Gaganendranath Tagore was the first modern Indian individual artist who tried to transform printmaking from a mere economic activity to cultural activity and to communicate his socially significant social responses to people. He is also known as the first Indian cartoonist of early twentieth-century of colonial India. He was a versatile artist, from being a landscape artist to a cubist painter, he is also known for his caricatures which were given the status of a work of art rather than be simply seen as illustrations in magazines.[3] He utilized Lithography as the main tool for his artistic works. His work was mostly influenced by colonialism, the rise of nationalism sentiments, the introduction of Western culture, contemporary social and national issues.

Figure 4- *"Gaganendranath Tagore"*

Picture source: (https://www.getbengal.com/details/celebrating-birth-anniversary-of-one-of-indias-first-modern-painters-gagan-thakur)

Society demography during British India

British ruled India between the nineteenth and twentieth century. The main features of contemporary British Indian society were mostly indigenous, few were influenced by Mughals that ruled India, and while few were influenced by British colonialism. Social elements prevailing at that time can be classified as follows:

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[1] Neeraja Murthy, (March 22, 2016 updated: October 18, 2016), 'Women in all forms', Hyderabad, https://www.thehindu.com/features/metroplus/Woman-in-all-forms/article14169523.ece

[2] A.S Raman, (September 1985), 'Graphic Art in India Since 1850: An Exhibition. Printmaking in India: Focus on the Western Region India', The Lalit Kala Akademi, New Delhi. p 52.

[3] Anavisha Banerjee, (July 2018), 'The Satirical Caricatures of Gaganendranath Tagore', Volume III Number ii, p 1. https://docplayer.net/88827728-The-satirical-caricatures-of-gaganendranath-tagore.html

Indigenous: - Caste System, Brahmin domination in society, Untouchability, Religious superstitions, Gender Inequality, Child Marriage, the Class difference in society, Sati Pratha.

Influenced by Mughal rule: - Ban on Women Education, Polygamy, Purdah system

Western Influenced: - Emergence of Anglicized Babus' class, Western dressing, punctuality, loyalty, professionalism, Women Empowerment, Gender Equality, Women Education, Rational thinking.

During the British period, Caste System was one of the most widely prevailing social evils practiced by Hindus in India. Society was divided into different rigid social groups categorized as Brahmin, Kshatriyas, Vaishyas, and Shudras. Brahmins were believed to be sacred and considered as most superior among all castes. They used to be Sanskrit scholars and are responsible for teaching and maintaining sacred knowledge in society. Hindu priests used to be Brahmins. Traditionally they used to serve as spiritual guides in society and officiate at ceremonies like weddings, and various Puja rituals. According to the *Manusmriti,* forbidden activities for Brahmins include making weapons, butchering animals, any antisocial activities, trapping wildlife, and other jobs associated with death. They are mostly vegetarian. However, few of them were corrupt and they used to take illegitimate advantage of their higher position, trust and respect in society. Corrupt Brahmins used to eat non-vegetarian food, take alcohol, and were involved in illegal activities and they cheat the people in the name of faith.

Gaganendranath Tagore targeted these corrupt Brahmins in their prints and showed these issues in a satirical way. He also showed Brahmin's domination in society through his prints. Through his prints, he also showed how Indian men dominate women and showed gender inequality prevailing in Indian society as the Women were treated as worthless and useless by many Indian men. However, the introduction of western culture and ideas in India resulted in the replacement of blind faith in current traditions and beliefs by a spirit of rationalism. It also causes the rise of the socio-religious reform movement in India. The introduction of western culture also brought Western dressing, punctuality, loyalty, professionalism, Women Empowerment, Gender Equality, and Women's Education in society. Gaganendranath also targeted Anglicized Babus' class satirically which were the Indian Clerks who were working under the British government. They used to wear western dresses influenced by the British and can speak English, unlike other common Indian men. They earned a lot of respect in the Indian society as they were literate and were in administrative jobs. Gaganendranath in his prints tried to showcase the above features of Indian society along with the influence of western culture and ideas on Indian society.

Impact of contemporary Social Demography on Gaganendranath's Litho prints

Gaganendranath's paintings can be divided into five phases. Phase-I or the 'Early Phase' [1905- 1911] consisted of ladnscape scenes from Puri, scenes from Calcutta, portraits, etc. His earlier sketches were in form of Postcards that he used to sent to his daughter from Puri. His Landscapes themes were deeply influenced by Japanese painters' theme as he showed Water in landscapes either in form of waterfalls, sea, or rains just like in contemporary Japanes Artworks. Most of the paintings under this period were published in 1912 as illustrations in Jeevansmriti, an autobiography of Rabindrantath Tagore. Gaganbabu started involving in Kirtans after sudden demise of

his son which influenced his artworks during this period. His drawing on Shibu Kirtanya, the Kirtana singer was published in Jeevansmriti. His paintings were realistic and directly represented the visual experience into paintings.

Figure 5- "Pilgrims in front of Puri temple", Gaganendranath Tagore

Picture source: (https://pixels.com/featured/1-pilgrims-in-front-of-puri-temple-gaganendranath-tagore.html)

Phase-II [1911-1914] also known as the Chaitanya series, related to paintings of the spiritual leader Chaitanya and his devotees. This phase also included paintings of pilgrims done from imagination. These paintings were exhibited in the 1914 exhibition held in Paris and London by Calcutta School. After the death of his elder son, his paintings started to be influenced more towards the spirituality and at that time we can see himself more influenced by spritual leaders such as Chahitanya. Some of the paintings made under this period are 'Chaitanya and foot prints of Vishnu' and 'Chaitanya prostrating before Vishnu feet'. He showed Chaitanya doing 'Nagarkirtana' his followers in the town in one of the paintings. He also tried to show other parts of his life as well such as Chaitanya's departure form Nabadwip to Puri and his Niravana. He showcased few themes from Mahabharat such as 'Pandava safely escaping the Lakshagraha' in which he showed the Pandavas escaping from the house of wax made by Purochana. In 'Karna-Kunti Samvad', he showed the conversation between Karna and his mother Kunti during Mahabharat war.

Figure 6- "Chaitanya and foot prints of Vishnu", Gaganendranath Tagore

Picture source: (https://pixels.com/featured/1-chaitanya-and-foot-prints-of-vishnu-gaganendranath-tagore.html)

Phase-III [1915-1921] also known as Bichitra Period consisted of most of his caricatures. The caricatures made during this phase were highly influenced by the contemporary British Indian society. Gaganendranath was very active as an actor in his Bichitra Club where Stage performances and Theatrical activities were performed. His theatrical play's themes started influencing his artworks as well. He showed social issues in satirical way through his Lithography and also tried to showcase the social issues in Hindu religion just like Vivekananda. In response to Montagu Chelmsford Reforms in 1919, he made his artwork titled 'State Funeral of H.H Old Bengal' in 'Reform Screams' published in 1921.

In Phase-IV [1921-1925] Cubist Period, keeping in touch with the latest ideas and trends in foreign, Gaganendranath also worked with cubist style of Art. The first series of his Art works under Cubist period were reproduced in RUPAM in 1922. His Artworks such as 'tagore reading poems at the Congress session' and 'Sir Jagadish Chandra Bose demonstrating his new aparatus'.consisted of his cubist experiments and the last phase (1925-1930) consisted of post cubist paintings.[1]

It was during Bichitra Period that Ganagbabu's artwork started to be influenced by social issues of contemporary India. The paper discusses the impact of contemporary social demography on prints of Gaganendranath Tagore by discussing few popular prints by him.

In the caricature, *Nuisance of a Wife* (from Adbhut Lok), we see a middle-aged fat man wearing dhoti-kurta and having a walking stick in one of his hands while he is holding a cigarette in the other (Fig.7). He seems to have full control over his wife and his family. ln the picture, he is followed by his wife who is traditionally dressed. She is carrying heavy luggage in one hand while her child is in the other. She looks very simple and appears more like a destitute as she is walking barefooted with heavy luggage while her husband doesn't even bother. She is carrying all the burdens and responsibilities of her family but her husband doesn't show any sympathy for her and he sees her wife as a nuisance. Also, in the picture we can see at a distance there is a younger generation family having a couple along with their daughter. They all are dressed in western attire. The husband appears as a Babu as he is wearing western attire with trousers, a coat, and a hat. Her wife is dressed in a sari along with her jewelry. The woman has kept her hand over her waist and her husband is watching her while she is watching on a different side. She doesn't look polite doesn't have even full control over her baby as her baby is roaming on her own. Again, the title fits in this younger generation's family as well because maybe the husband sees her wife as a nuisance.

Through this print, Gaganendranath has beautifully shown contrast in two families. The first family represents the male dominant society of that time while the other family shows the influence of Western culture. The first lady gives an impression of a traditional Indian woman while the other gives an impression of a more liberal woman and it shows that more gender equality started happening during British rule. The Bengali title given by Gaganendranath is *Pothe Nari Bibarjita* which translates into

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[1] Disha Mondal, (2021), 'The Forgotten Bengali Cubist Artist: Gaganendranath Tagore', Volume 9 ~ (Issue 3), Journal of Research in Humanities and Social Science, pp: (35-37).

Woman Abandoned/ Forsaken on the Road/Street.[1] So, it becomes clear that the woman who is abandoned is the docile wife as she is left behind with all the burdens since her husband sees her as a nuisance.

Figure 7- "Nuissance of a Wife", Gaganendranath Tagore (1917)

Picture source: (https://collections.vam.ac.uk/item/O1171845/nuisance-of-a-wife-lithograph-tagore-gaganendranath/)

Another one of the most famous Satirical Litho prints of Gaganendranath Tagore is the "Don't come into the room, I am about to become a Sab". In (Fig.8), we see a man wearing a dhoti, a kurta is hurriedly changing his clothes. He looks like possibly a "Babu" and traveling inside the upper class of the Indian railway during the British India period. During British Raj in India, train coaches were divided racially as it was divided into the upper class and the lower class. The upper class was reserved only for the White people (English men) while the Indians(black) were only allowed inside the lower class. If any Indian was found traveling inside the upper class, then they were thrown out from that class and were punished. This person in the picture is trying to put English clothes (trousers, shirt, and tie) over his original attire to change his identity to be mistaken as a 'Sahib' (In British Raj, Sahib was the term used to show respect to English men by Indians). However, the Ticket Examiner caught him red-handed while changing his identity by changing the dress. Although the Babu in the picture tried his best to appear like a Sahib by changing his dress and smoking a cigarette in his mouth. The TTE caught him impersonating as a Sahib for traveling in the upper class. Gagnendranath has beautifully shown this very serious issue of racism practiced by the British in India in a satirical way through this print.

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[1] Anavisha Banerjee, (July 2018), 'The Satirical Caricatures of Gaganendranath Tagore', Volume III Number ii, p 11, https://docplayer.net/88827728-The-satirical-caricatures-of-gaganendranath-tagore.html

Figure 8- "Don't come into the room, I am about to become a Saab" By Gaganendranath Tagore Lithograph.1917.

Picture source: (https://collections.vam.ac.uk/item/O1171926/metamorphosis-lithograph-tagore gaganendranath/)

In another Litho print of Gaganendranath- "Imperishable Sacredness of Brahmin". In Fig. 9, we can see a middle-aged Brahmin(pandit) man who is very fat. He is seen wearing the sacred thread over his body (also called Janeu/paita in regional languages) and he also has a choti over his head. He is drinking wine through one of his hands and is holding his wife on his shoulder through another hand. He is also holding a chicken in one of his hands and is holding eggs with one of his hands. His wife is smoking hookkah through one hand while she is tearing apart the pages of some holy Hindu scriptures. We can also see a heap of coins(money) at one corner near the Brahmin.

Brahmin was believed to be sacred and considered as most superior among all castes. They used to be Sanskrit scholars and are responsible for teaching and maintaining sacred knowledge in society. However, few corrupted Brahmin used to take illegitimate advantage of their higher position and respect in the society, and the society's trust in them. They used to cheat people in the name of God. They brought evil practices into society like the caste system and dominate over the other castes and used them to suppress the lower castes. These few corrupted Brahmins followed untouchability, i.e., some of the very lower caste people were considered untouchables, and upper caste people were forbidden to touch them. Gaganendranath has targeted these corrupt Brahmins many times through his Litho prints in a satirical manner.

Figure 9- "Imperishable sacredness of a Brahmin" By Gaganendranath Tagore. (1917).

Picture source: (https://www.birlaart.com/exhibit/imperishable-sacredness-of-a-brahmin/)

Epilogue

Lithography was primarily introduced by the British in India as a tool for commercial printing for running their business processes by the establishment of Lithographic presses in India. It was also used for printing activities by Christian Missionaries for propagating Christianity in India. However, later it began to be used as a medium of Artistic Impression by Indian Artists when they started to learn and use this form of printmaking for their artworks during the late 19th and the early 20th century and Lithography as distinct from printing began to emerge in India.

The study suggests that the earlier litho prints by Indian artists were mostly themed on natural landscapes, mythological or spiritual themes as we can see from the works of Raja Ravi Varma, Nandalal Bose and Gaganendranath. During this British period when the Lithography was introduced in India and began to be used by few Indian artists, Indian society was full of social and national issues such as Caste System, Brahmin domination in society, Babu culture, British Imperialism, etc. This contemporary social demography started to influence the artworks of Indian artists.

The Kalighat painters had already made social satire the subject of their work in visual medium and later we see Gaganendranath Tagore's Litho prints from his books Adbhut Loke (1915), Virup Vajra (1917), and Reform Screams (1921) were deeply influenced by the contemporary Indian society. His cartoons such as 'Nuissance of a wife', 'Imperishable sacredness of a Brahmin', etc – lashed out against orthodoxy in Hindu

society, castigated anglicized Bengalis and other social evils, while his political satirical cartoons such as 'State Funeral of H.H Old Bengal', etc draw attention to the British Raj in striking idiom. It was a paradigm shift in the Lithography theme as Lithography began to be used as a printmedia tool for showcasing social and national issues in satirical way as his artworks on social satire were published in different articles and newspapers which thus helped in bringing social reforms in the society and as well as brought the rise of nationalism feeling in Indian society which ultimately supported India's struggle for freedom a lot.

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Imparting the Lost Knowledge of the Heritage Craft of Tamil Nadu

Asmaa A. S. H. & Kalaiselvi R.[2]

ABSTRACT:

India is well known for its diverse cultural heritage crafts and is the second-largest employment producing industry after agriculture. Due to the growing technology, traditional crafts are slowly fading away, and the artisans are seen shifting to other forms of occupation for a better economy. There is also a need for technical and design interventions for the crafts based on the current generation's liking and demand. This paper focuses on the tacit knowledge transfer of two cultural heritage crafts of Tamil Nadu called Art plate and Shola Pith, which was imparted to the younger generation through an interactive session. Art plate is a metal craft comprising of three metals namely brass, copper, and silver, which employs the damascening technique and Shola Pith is a traditional art form that is done using a stem obtained from the Pith plant, in which the soft white core is extracted, cut according to the desired designs and glued to make models and other things. The knowledge transfer happened in a two-way process from the artisans to the designers and students, on their traditional process and culture, and the contribution from the students and designers to the craftsmen on contemporary applications to meet the current trends. For art plate, a 5-day workshop was conducted, where the artisan demonstrated the traditional process of the art plate making, and the designers contributed their designs for producing contemporary applications with the traditional craft. For pith work, a hands-on workshop was conducted, where the artisan demonstrated working with the pith material to make various art forms, and at the end of the workshop, numerous models and works were created by the participants. Complete documentation of both the crafts was done, to preserve the traditional knowledge that has been passed on for generations. The process helped in creating awareness of the hidden lost knowledge of the heritage crafts and in supporting the artisans to sustain their craft.

KEYWORDS: Handicraft, Knowledge, transfer, culture, heritage, workshop

INTRODUCTION:

India is well known for its rich, exquisite, and unique handmade crafts with diverse art forms made throughout the country. The handicraft industry is one of the largest employment-producing sectors in India, providing livelihood to a large percentage of artisans from the marginalized sections of the society (Garg & Dhingra, 2014). It is recognized worldwide and is considered a tool for poverty reduction. (Allal, M. & Chuta, E, 1982, Abisuga-Oyekunle, O. A., & Fillis, I. R., 2017). It contributes to the economic development of the country and has cultural and artistic importance (Grobar, 2019; Lita et al., 2020).

Every Handicraft embodies the cultural heritage and identity of a particular community or region. The relationship between the people, the region, the tradition, the rituals all combined constitutes the cultural heritage (Kokko, S., & Dillon, P., 2011). The loss of cultural heritage leads to loss of cultural identity (Kokko, S., & Kyritsi, A., 2012), hence there is a need for safeguarding the cultural heritage.

Even though the importance of handicrafts has been widely recognized, there are various challenges faced by the industry. One of the major challenges is to preserve the traditional crafts and the knowledge which has been done scarcely (Yang et al., 2018).

158

Due to rapid globalization, many industrial products have been developed, making it difficult for the artisans to compete, thus making them sell their products at lower prices (Leesuwan, V., 1999; Greenhalgh, P., 2003). This led to a lower economy, making the artisans shift to other forms of occupation, with better revenue.

The younger generation is also out of touch with the country's traditional culture, which is usually passed on through informal learning in homes or through formal education in schools. (Kokko, S., & Kyritsi, A., 2012) The knowledge acquired and retained by the craftsmen is a crucial resource to be transferred for the survival of the arts and crafts. Through the knowledge transfer the values, purposes, beliefs, culture, and experience are shared from one unit to another unit (Manfredi Latilla et al., 2019).

Hence, there is a need for transferring the knowledge of the traditional arts and crafts, to preserve the heritage and the culture of the territory which reflects the tradition and creates a solid identity. The knowledge transfer creates employment opportunities as well as contributes to the survival of the craft in the long run. In this paper the traditional knowledge of two handicrafts of Tamil Nadu namely Art plate and Shola pith has been transferred to the younger generation through workshops, thus making them aware of the lost heritage craft. Two workshops were conducted for two handicrafts namely Art plate and Shola pith, which are two of the many handicrafts undertaken under "Technological Interventions of Handicrafts of Tamil Nadu", a SHRI (Science and Heritage Research Initiative) project under DST (Department of Science and Technology).

ART PLATE:

Art plate is a cultural heritage craft, of the Thanjavur district, a city in south India. It's a unique and traditional art, which has been evolved through the encouragement of the early Hindu kings, during the Marathi period. The artistry has been confined, to the Vishwakarma community, for many years, which has been preserving the artistry from extinction, by handing down the skills and techniques, through various generations (Nambiar, P. K., 2016). In recent years, the craftsmen, and the young artisan are seen shifting to other forms of employment, or job opportunities, due to the less demand and economy of the craft, in the industry.

The art plate consists of three metals namely: Brass, the base plate, silver, and copper sheets for the primary and the secondary reliefs as shown in fig.1. The art plate is one of the crafts which practices damascening and has a GI tag. The workshop was conducted from 19th October to 23rd October 2020, for five days in Rajalakshmi engineering college, Chennai, India. The five-day workshop observation was done and was properly documented.

Fig.1.Art plate

SHOLA PITH:

Shola Pith is a traditional art form that is created using a stem obtained from the Pith plant in which the soft white core is extracted as shown in fig.2., cut according to the desired designs and glued to make models and other things. The pith plant grows in marshy water bodies of certain places. A workshop on the pith work is ongoing in Rajalakshmi Engineering College, Chennai, India, where an artist, a student, and architects are participating.
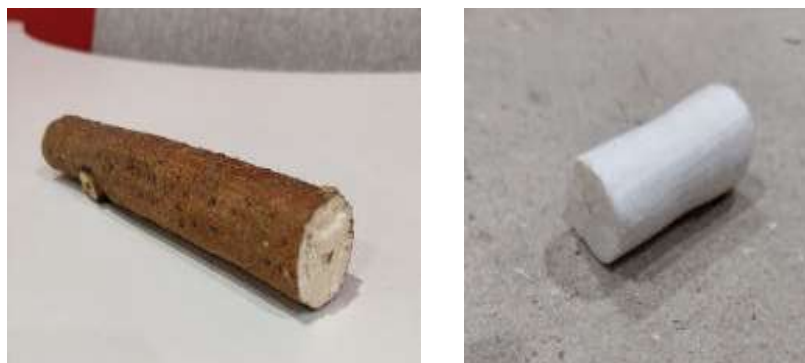
Fig.2. Pith plant and soft wite core extracted from the pith plant

METHODOLOGY:

The knowledge transfer happened in a two-way process for both the art plate and the Shola pith as shown in fig.3. In the beginning, there was knowledge transfer from the craftsmen to the younger generation, and at the end of the workshop, there was the transfer of ideas and designs from the participants to the craftsmen to enhance their craft with unique contemporary designs.

The workshops were an opportunity to create a shared platform for the craftsmen, designers, and engineers, to learn about their unique craft, which is fading in today's technological age, and sustain their craft by improving their marketing by creating new designs and developing simple tools to reduce the drudgery.

For art plates, the craftsmen shared their traditional making process and culture which has been followed for generations, the designers contributed their contemporary ideas and applications, while the engineers contributed their knowledge in metal-related machinery.

For pith work, the craftsman shared his knowledge on the process of sharpening the knives for working with the pith, the process of cutting the pith plant to slices and shapes of required measurements, and the different kinds of cut designs that can be employed while doing different art forms and models. The participants are now having a hands-on workshop by learning the different techniques of working with the pith under the guidance of the artisan, and are working on creating different models and designs.

DISCUSSION:

ART PLATE: Three art plate craftsmen namely Mr. Shankaran.J, Mr. Kumar, and Mr. Kadhirevel were present during the workshop for the Art plate. They are from the Vishwakarma community, from the city of Thanjavur. Mr. Shankaran is specialized in dye-making, for around 48 years, while Mr. Kumar, and Mr. Kadhirvel, are brothers, specializing in the fitting of reliefs on the art plate, for around 25 years. The craft knowledge, for the brothers, has been passed on from their father, who was an art plate
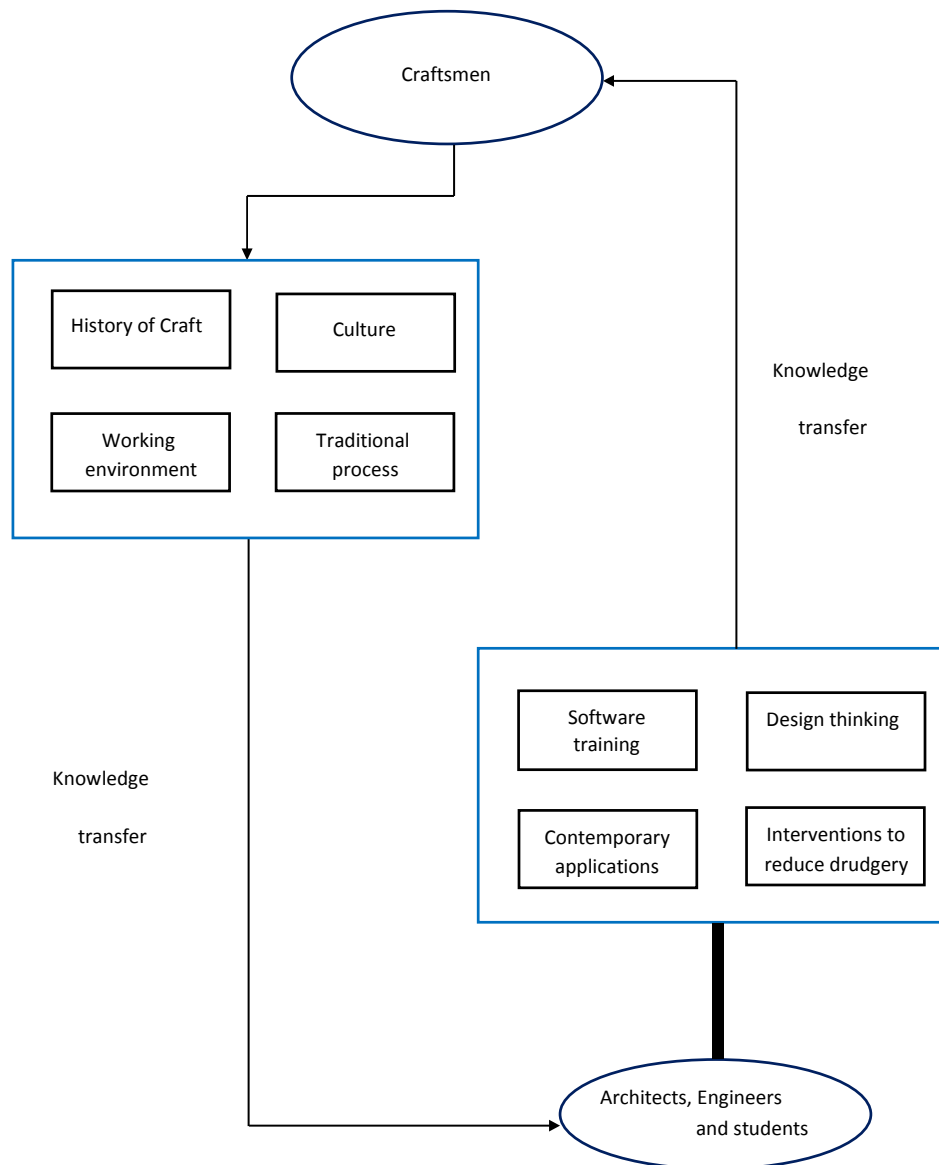
Fig.3. Knowledge transfer process

artisan, who specialized in dye-making, and fitting of reliefs, while Mr. Shankaran, is the only family member, practicing the art plate craft.

The first day of the workshop started with a brief introduction by the artisans about themselves, their families, the designs, and the traditional tools that have been used as shown in fig.4 and fig.4.1. There was an interaction and discussion, with the artisans, from the questionnaire prepared, on their history, working environment, and their designs. The traditional tools used by the craftsmen were showcased, with which a book was created by the team with 3d models of hand tools, engineering drawings with accurate dimensions, description of each tool, and tooltips, with its specification, which has not been documented before (Fig.4.2). The book also has a link to an e-library, which can be used as a quick reference for making the tools by the artisans and the future generation themselves.

Fig. 4 interaction between the artisans, designers and engineers

Fig. 4.1 Art Plate designs showcased by the artisans

162

Fig.4.2. A page from the tool book that was developed

On the second day, the craftsman Mr. Shankaran.J demonstrated making the basic impressions on dye (Fig.4.3) and the making of the lead mould process (Fig.4.4), which is done twice or thrice depending on the intricate details and embossing.

Fig.4.3. Artisan demonstrating the process of creating impressions on the dye

Fig.4.4. Making of lead mould

163

The third day was followed by the demonstration of melting of silver (Fig.4.5) and making detailed embossing on the dye by creating lead moulds (Fig.4.6), followed by the fixing of the art plate to the wooden base demonstrated by the artisan Mr. Kumar (Fig.4.7). On the fourth and the fifth day, the artisan Mr.Kumar demonstrated making base markings on the base plate, extracting the impressions on the reliefs from the mould (Fig.4.8), fixing the reliefs to the plate, and making detailed impressions. It was followed by polishing the art plate, demonstrated by Mr. Kadhirevel.

Fig.4.5. Melting of silver

Fig.4.6. Dye with detailed embossing

Fig. 4.7 Fixing of brass plate to the wooden base

Fig. 4.8 Extracting the impressions on the metal reliefs

The documentation of the traditional process of the art plate was done to preserve the traditional knowledge which has been passed on for generations. A few technological and contemporary interventions were given by the technical and the design team, to reduce the drudgery and to expand their marketing.

One of the major processes in art plate making is the making of dye and lead moulds which are created for extracting impressions on the reliefs. It is a time-consuming process and has immense drudgery involved, due to continuous hammering of the tool to create detailed embossing and intricate details. The technical team designed an electric hammer tool to be used for making intricate details and detailed embossing in a short period with less stress involved (Fig.4.9). As an alternative for lead mould, which loses its details after extracting many copies for the reliefs, acrylic moulds were developed for designs with laser cutting to extract the impressions easily (Fig.4.10).

The old generation craftsmen were not comfortable using new tools, since they have been used to working with their traditional tools. However, the younger generation craftsmen were seen shifting to other occupations due to the excess work involved with less economy. Hence simple tools are given to the young generation craftsmen so that they will continue to work with the craft but with new technologies.

Fig.4.9. Electric hammer tool
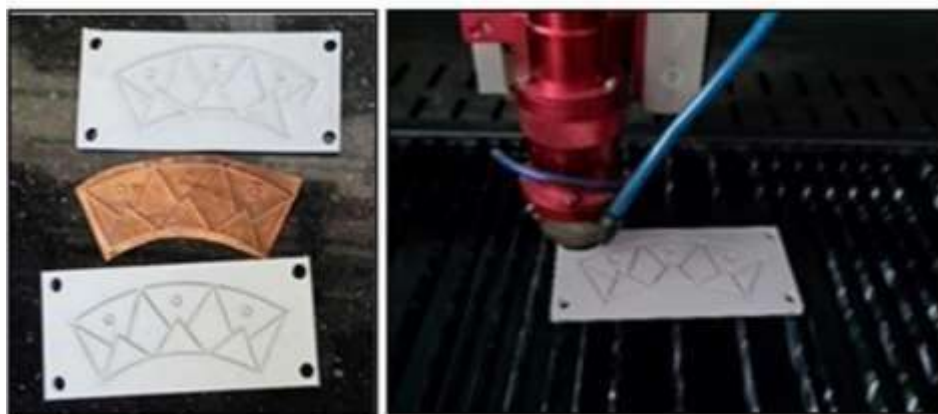
Fig.4.10. Moulds developed from Laser cutting

To expand the marketing, a group of designers came up with contemporary applications and designs to be incorporated with the traditional art plate craft. The artisans were seen using the same traditional designs with different combinations, hence designs with themes of Harry Potter, zodiac signs were developed to reach the younger generation (Fig.4.11). The application was also extended to diaries, bags, and pieces of jewelry. In addition to that, design thinking knowledge and basic software training were given to the artisan's son, to develop his father's craft using digital technology (Fig.4.12).

Fig.4.11. Contemporary applications

Fig.4.12. Software training

SHOLA PITH:

A workshop is being conducted where the master artisan Mr.Ulaganathan, who has experience of around 25 years on working with the craft demonstrated the process of working with the pith plant. His pith works comprised of creating various temples such as Thanjavur Brihadeeswara temple and Madurai Meenakshi temple, Taj Mahal, churches, and other famous landmarks. In addition to this, the artisan has also done models for factories, schools, and houses.

On the first day of the workshop, the artisan demonstrated differentiating between good and bad pith (Fig.5) A good pith has a soft texture in the center (Fig.5.1), while a damaged pith has a hardcore, with a light brown color with brittle nature (Fig.5.2), due to lack of water content while growing. While working, the damaged part of the pith is removed and the rest of the pith is used.

Fig.5.1. Normal Pith

Fig.5.2. Damaged Pith

Fig.5. Good pith and damaged pith

It was followed by the demonstration of sharpening the knife for working with the pith, using the sandpaper stone. The sandpaper stone has a rough and smooth texture on each side as shown in fig.5.3. At the beginning of sharpening the knife, the rough texture side is used for sharpening. Then, the soft texture side of the sandpaper stone is used for finishing. A cloth is placed below the sandpaper stone, to prevent the stone from moving while sharpening. The knife is sharpened flatly in the beginning by moving front and back and then the edge is sharpened by moving left and right as shown in fig.5.4. This process takes a long duration for around two hours, if the knife is new, with immense drudgery involved. While working with the pith, the knife has to be sharpened once in a while, which again takes a long time to sharpen and to resume with the work.
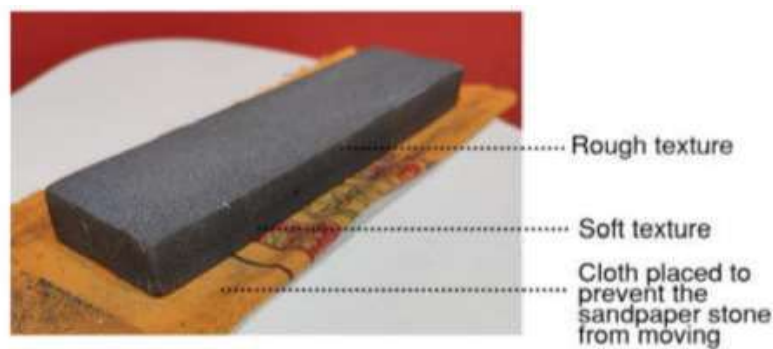
Fig.5.3. Sandpaper stone
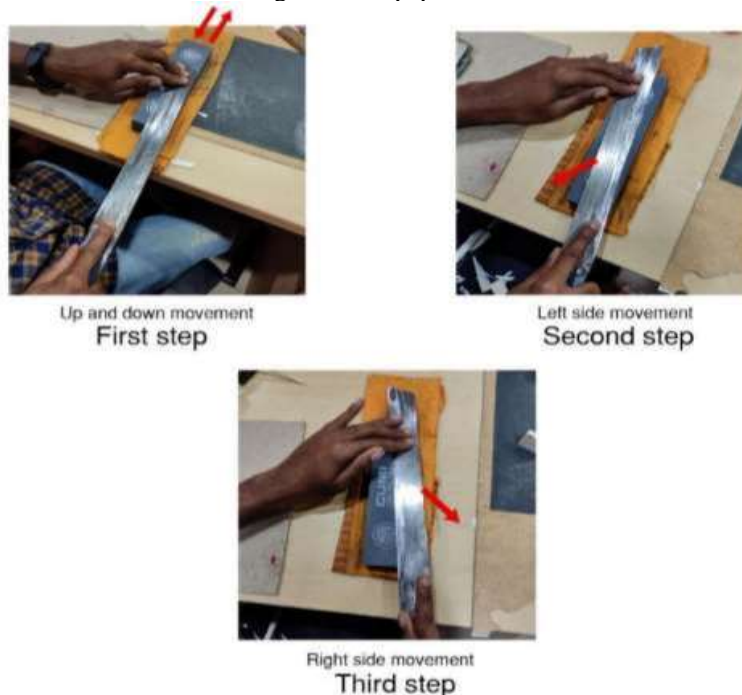
Fig.5.4. Process of sharpening

The next few days the artisan demonstrated removing the skin from the pith plant, cutting it into slices for further designs and sticking it for making models, demonstrating making flowers, and guiding the students in making temples and different designs as shown in fig.5.5. The various cut designs (Fig5.6) used while cutting the pith are V shape, W shape, VW shape, and slanting V shape which has been documented(Fig.5.7). The documentation of some of the works of the artisans (Fig.5.8) and the students have also been done (Fig.5.9). Various interventions are being developed for making it easy for the young generation to work. Some of the processes which needed intervention are the knife sharpening process and extracting the white core from the pith plant, which are the two processes taking a long duration.

Fig.5.5 Students working with pith with the help of the artisan
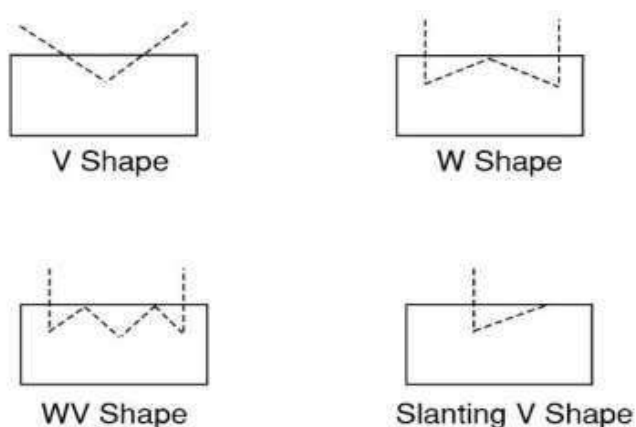
Fig.5.6. Various Cut designs

Fig.5.7. Documentation of Various Cut designs

Fig.5.8. Some of the works done by the artisan

Fig.5.9. Works done by the students

For the knife sharpening, a small sharpening tool that was available in the market was bought and given to the artisan and students to use while sharpening the knives (Fig.5.10). However, it was found that it was useful only for sharpening in between the works for a short time and is not effective for knives that have not been sharpened before with the sandpaper stone. A sharpening tool is being designed by the team, to be used for the future. In addition to this optimization of raw material is being developed by the team to make the process easier and faster, since the process of extracting the white core takes a long duration. In addition to this, ergonomic furniture for the artisan is also being developed for an organized working environment and better comfort and productivity.

Fig.5.10. Knife sharpening tool

CONCLUSION:

The knowledge transfers of two traditional crafts of Tamil Nadu namely Art plate and Shola pith has been focused on in this paper. Through the workshops, the traditional knowledge and the making process of the craft which has been passed on through

generations have been transferred to the young generation, and the process has been documented to preserve the valuable knowledge, which forms an identity to a particular community. To improve the craft and to expand the marketing of the Handicrafts, contemporary designs and new tools have been developed by the engineers and the architects, to blend the traditional with the contemporary to meet the current trends. This process helps in improving the livelihood of the craftsmen and creates new job opportunities and awareness of the hidden craft, which makes the craft sustain for a long time.

ACKNOWLEDGEMENT:

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A Study on Kishangarh Painting Art and its transformation for Textile Material

Sambaditya Raj & *Rajeshwari Choudhary*

Abstract-

India is well known for its culture at the global level, the image of its culture is well rich patterned with the auspicious handicrafts from different regions of it. Rajasthani handicrafts in itself holds a exquisite identity across the world with luring artifacts including painting, textiles, furniture, Jewellery etc. The world famous Bani Thani is such an art among them dates back to around 1750s. The art is world famous with its exquisite hand painting technique and skilled artisans. Kishangarh city, known as the Marble City has gained its popularity and identity for its painting art- The Kishangarh Paintings. The Bani-Thani (Radha) work is the most popular piece of art. This world famous painting of Bani thani (Radha) was made by the great artist Nihalchand in 1778. The art is assumed to be 300 years old. This art is practiced on canvas with Tempera Technique with vegetable and minerals colour with pure silver and gold. The government has launched a post ticket on 5th May, 1973 with the painting of Bani thani. One of the senior artist Shree Shahzad Ali said worriedly that this art needs conservation. Many families are still practicing this craft but with the time it is decaying and there is a need to extend this craft in textile and other product's market.

The purpose of this study is to find out the possibilities and suitability of print making techniques, including Digital printing, hand painting to transform this craft for textile material. This study is aimed to find out the suitable ways to extend this craft in textile sector. It will clear the potential to enhance the revenue of this craft and will strengthen the it's structure.

The methodology used for this paper is based on a qualitative approach with the support of descriptive data. This study includes interaction and discussion with artisans and organization, involved and supporting this craftwork. The analysis of this activity will be helpful to figure out the possibilities and suitability for print making techniques from this craft for textile material. The study is tended to be weaved by the primary and secondary data collection.

The importance of handicrafts can be seen with good interest in present time. With the time and changes the crafts are turning towards the decay. By introducing this craft for new product design in market the decaying condition can be improved, as well as we can strengthen the identity and reputation of the artisans involved in this art and craft.

Keywords- Kishangarh Painting, Hand painting, Textile Printing, Craft, Artisans.

1. Background

Indian art and culture is to keep flourishing since the time of early civilization. The records of Indian art are found on the wall of caves, sculpture, architecture etc. Indian art and craft is growing since its development. This heritage is a good manifestation of culture and life in India. India has been kept attracting world to its culture and art. Indian art and crafts are synergy between high skilled craftsman, technique and material of the craft. The Indian crafts are rich in their design language and carry a sustainable design technique. These crafts are truly eco sensible, which involve the transformation of material into useful products with hand skill and use of simple tools

following their original design technique. Craft is defined as a self-expression of artist, which carries some imperfection as a result of handwork, tools and artist's work style which add beauty in the craft.[6]

During the time of kings in India, the crafts were in prosperous state and preserved by the kings. But with the introduction of industrialization these crafts slowly lost their glory. This created troubles for artists. The artists were not able to compete machine-made in terms of fast production and price. The alternation of hand mad reduced the quality of craftwork. The changing market culture also brought hurdles in the relationship of consumer and craftsman, this created gap between them as a result of lack of contact the craftsman were getting less work.[6] Some crafts declined at a very fast speed while other crafts survived very hardly. The lack of work and income from craft industry directed artisans to adopt other professions for livelihood.

The multiculturalism brings changes to the global market and customers. The contemporized products are in demand and artisans are keeping trying to flow with time. Artisans are trying their hands in new techniques and design styles to remain in market and to keep their livelihood alive. However, this new era influenced the craft world in many ways, positively and negatively. Art and crafts are hand practiced skills and it is finding its new ways in mass production and machine made products from the transformation of the original craft for a better market with new products.

Many crafts are stilled sustaining on their original modes or old technique, but these crafts are endangered and facing lack of interest in generation to carry this craft forward.

The Indian paintings are one of the most attractive and luring article for the whole world, it holds a glorious history. Traditional Indian Miniature paintings were started in 9th -10th century, but the painting studios were established at the court during the Mugal Empire (1526-1752 A.D.). After the independence, the painting craft was preserved and flourished under the Pahari and Rajasthani estate or domain (1700-1900 A.D.). Although, this craft continues to carry the Mugal influence. Rajput artists enjoyed and lived the art life without high status unlike Mugal artists.[1]

Miniatures were governed by the literature, found in the form of original painting and to enact of some text, information.

As the name show, it is small in size but exceptionally pictorious with all details. It is a rich source of visual exhibition of social and cultural history of the specific regions, empire and even the spiritual scenes and deities.

The Rajasthani School of Painting was well started to grow by the late 16th century under the Mewar school of Painting. By the time Rajasthan's many region prospered in this craft and identically named- famed as Kota, Bundi, Bikaner, Kishangarh, Mewar and Jaipur.

Apart from lyrical approach through extensively beautiful composition of lines and colours, this craft is alluring with its significant visuals that hold interpretation of detail. The depiction and elaboration of Hindu deities are prominent in Rajput Paintings, where the extolling of Radha-Krishana's romantic love is in a traditional composition.[1]

The Rajasthani Painting is centric to the Indian traditions and inspired by the legend of Indian history and Culture, including religious literature, love poetry in Sanskrit and other regional language, folk lore and other artistic theme. However the influence of religious culture is deep on the Rajasthan miniature painting and thus the dominance of deities' figures are greatly evolved. Lord Krishna is the most popular among deities' figures.

The subject of Kishangarh School of Painting covers wide areas including Hunting scenes, court scenes, romance of Radha-Krishan, Portraits of Kings, with rich background with immense details.[3] This painting style is depicted as per the poetic description in form of Poem in Rajasthani language by raja Sawant Singh or Nagridas. Its style is unique with the detail of long faces,sharp nose, lotus like big eyes, highly arched eyebrows and sharp shaped chin.[2]

1.1 Kishangarh school of Painting-

Kishangarh is a city in Ajmer District of Rajasthan, founded by the Kishan Singh in 1611.

Kishagarh shaili was developed in the period of Maharaja Maansingh and the development of Bani-Thani painting was done in the period of Roopsingh (1643-1658) and flourished in the time of king Sawant Singh, ruler of Kishangarh.[4] 1748-64 was the golden time for this art. Kishangarh school or Kishangarh Shaili is well known for the depiction of Radha and Krisan. It is excelled in the depiction of feminine beauty ideally known as Bani thani. Bhawani Das, Surat Ram and Nihal Chand are prominent artist behind this painting craft development. This painting is centered to depict the scenes of Banana trees, lake view, water birds, boats and legendary love couple Radha –Krishan, with the use of White, Pink, crimson, orange and saffron colours. Radha krishan are the main subject of this painting style. This art is done with the use of natural colours. The Indian central government has released a Post-stamp on 5th may, 1973 to encourage its popularity.[5]

Fig.1. Portrait of Bani-Thani, Kishangarh school of Paintings.

1.2 Attributes and symbols-

- Use of bright and intense natural colours.

- Highly adorned human figure, sharp features and graceful postures.

- Banana trees, water birds, Jal Mahal, Lake and garden with deities.

- King and mistress as Deities- Radha and Krishan.

- Motifs symbolize Love, Romance and Prosperity.

At present time there are only few families to continue this art. With time the artists are switching to the online platform for selling and to remain available, but there are very few people who want to learn this art, and this fact depicts the future of the craft said by a Senior Artist Nemichand from the city.

Challenges faced by Kishangarh Painting Art- Despite popularity this art is facing many challenges and its present situation is really in the decline, following are few points among many challenges-

- Artists are not getting work.

- The new generation is not showing interest to learn and continue this art.

- The artists are facing financial issue due to lack of income from this work.

- Customers are buying digital work in place of this original work.

- The art is not explored by the tourists and orders due to corona.

2. Purpose of the Study-

- To revive this traditional art of Kishangarh Painting Art.

- To give new dimensions to this traditional art yet maintaining its essence.

- To create market for artisans with new products.

- To enhance the livelihood and to create employment opportunities for artisans.

Dr. Faiyaz Ali Khan has done lots of work to record the history of Kishangarh Painting and encouraged his son Shazad Ali Khan. Shazad Ali has worked a lot to revive this art and working since his childhood, his work includes hundreds of painting. His work was purely composed based on the poetic lines by Nayika (Bani-Thani- Poetess) and Sawant Singh (Poet and King of Kishangarh).

This painting includes wide range of composition including, lush green garden, water bodies, Jal Mahal, flora-fauna, Radha- Krishan, Gopis.

A senior artist Nemi Chand says , this art is in its decline period and at present this is the last generation for this art and showed his pain about this situation of the art. He also said that the pandemic situation has effected this business very strongly and this art need efforts to revive.

Senior Artist and two times National Award winner for Kishangarh Painting, Brij Mohan ji said that the artists are not getting enough work while a few years ago the artists were busy with good amount of work and they were satisfied. The artists are

engaged in this work for the last 30-40 years and highly skilled to work on different materials.

2.1. Securing this Art-

To secure this art many collective efforts are to be done. As the interaction with the artists clears that the art is now losing its glory and this is the last generation to keep this art alive. The senior artists are keen eager to show interest to teach this art but became panicked to see no interest in the generation. This art can be secured by organizing workshop for art students, by introducing new products for art including Jewellery, Textile products, Home furnishing and decore products. Designers can work widely for their collection taking inspiration from this art. Many new materials can be introduced as the artists are skilled to work on various materials. Many steps can be taken by Government to preserve this art. This study is done to make efforts to propose the technique to transform this art into Textile materials.

The popularity still remains in society for the handmade paintings and handicrafts. This art technique can be transformed on textile material with the use of suitable printing techniques, including screen printing, digital printing. The wide range of motifs and design pattern can be developed from this art and design possibilities are really good of this traditional art for contemporize fashion. This craft has strong design language which is suitable for home decore and apparel textile materials.

The wide transformation of the art with the printing technique can be done on Cotton, canvas, organza, silk material and on synthetic materials. The textile printing techniques for this transformation are Digital Printing, Screen Printing. The designers can take this transformation idea to next level.

The successful transformation of painting craft for the textile material can be seen with the reference of Pichwai Paintings, Madubani Paintings. Designer Ritu Kumar, Anita Dongre, Satya Paul, Neeta Lulla, Prashant and Shweta Garg took this craft to another level.

The possibility of this Kishangarh Painting is same to transform into apparel, furnishing, accessories and jeweler making.

3. Methodology-

This study is focused to propose only printing and painting technique for transformation despite of other structural and decorative technique. Two methods are used for these techniques- Hand Painting Method and Digital Printing Method. These methods are most suitable for the transformation as the methods can carry the details and uniqueness of this painting. The design language of this craft is best suitable for home decores articles, and apparel products, and the products can be designed from these categories.

Materials- Cotton, Silk, Wild Silk. Canvas, Organdy are suitable for this transformation. Material selection is based on the friendliness of technique to transform the art, organic material is best for this purpose.

Methodology-

Market Study- Indian craft Market

Product Category- Home furnishing and Apparel.

176

Process-

Design Development- Extraction and stylizing of motifs,

Design development for pattern,

Transformation-

Direct Printing Style -

Screen Printing Method

Digital Printing Method

Block Printing Method

Hand Painting Style-

Medium- Vegetable Dyes.

Transformation with hand painting- This process involves few steps such as, Design development for pattern, Tracing of pattern on material and the hand painting on the material's surface. Design can be made on unstitched product on the plain material and on Stitched products.

Design Development for Pattern- The motifs and patterns can be extracted and developed, taking inspiration from Kishangarh Paintings. After this step the developed patterns is transferred on the surface of material by the artist using a temporary marking material like Chalk and lime paste. The last step is of Hand painting and coloring, in which the artist paints the pattern using the fevicryl painting colours on textile material.

Transformation with Digital Printing- This process is less labor-intensive and done on Machines. This process involves steps like Design development On Software with proper size and colours specification and then the printing process is done with the help of digital printing machines.

The beauty of this painting crafts lies in the details done by hand, thus the Hand painting on textile is the best way to carry this uniqueness. This method would encourage the livelihood of artist and keep this painting art alive. This method is little expensive and time consuming but eco friendly in terms of process and material used for this. On the other hand the Digital Printing method is less time consuming less expensive.

Fig.2. Kishangarh Style of Painting on Textile Material for Saree.

Limitations-

Technique- only printing and painting techniques for transformation.

Methods - Hand Painting Method , Direct Printing Method.

Materials- Cotton, Silk, Wild Silk, Canvas, Organdy.

4. **Conclusion-**

The Indian art and craft industry is huge and involves millions of artists and craftspersons. Crafts hold the traditional identity and value of country and support the economy too. This is set up in rural and urban area of country. This review article talked about an Art –Kishangarh Painting Art and reviewed many aspects of this art. The study cleared the need to revive this art and showed some suitable suggestions for future implementation for this art's wellness.

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Kouna Mat: The Indigenous Handicraft of Manipur

Meinam Irikhomba Meetei

Abstract

Manipur is a state where the art and craft are highly practiced among the seven states of north east India. Peoples living in the state are very creative, talented and highly skilful. Production of craft items such as household items, and decorative and luxury items was the main economic source of the state. The art of pottery making, weaving, bamboo crafts, metals casting, and Kouna (water reed) items has been practiced since from the time immemorial. 'Kouna' botanical name 'Schoenoplectus Lacustries (Linn)' is one of the popular craft materials for making mats, bags, and other luxurious items. It is a long grass were mostly grown in shallow wetland places, ponds, canals, river banks and other places where the paddy plants are not suited. Manipuri Kouna mat is very famous and popularly used in the entire country. Kouna mat is an important household item and also used in ritual ceremony and on different occasions of Meetei community. The art making of Kouna mat were practiced since from the early period. Now due to the demand and popularity of the material many others Kouna craft items were also produced. There is a belief that Kouna plant is closely associated with Meetei devine God 'Ebudhou Pakhangba (a mighty god Dragon-like head python)'. Because of this believed people are very reserved and restriction of harvesting Kouna plant. Harvesting of Kouna plant on the day of Friday is avoided by many planters. It is believed that the plant may die or unwanted incident may come to the harvester. Because of this believe this plant is also locally known as Irai-Leima (Goddess of Friday). Kouna craft products are mainly prepared and made by women folks mostly practice in rural areas. The income generated from selling Kouna product is supported the economic activity of their family and it also enhances employment opportunity to the young generation. The paper will aim to understand the importance of Kouna plants for generating sustainable economy development to the society as well as to promote the varieties of Kouna products.

Keywords: Kouna, crafts, popularity, economy

Manipur is a small state located in the Northeastern corner of India country. The total area of the state is 22,347 Km^2. The state is geographically divided into Hills and Valley. The valley lies at the center of the state and it is surrounded by nine hills. It is approximately 700 square miles (2,000 Km^2) and its elevation is 790 meters above the sea level (Devi, 2013). It is believed that these valley areas were covered by water at the early time of Manipur history and there is no means of settlement land in the areas. According to the Directorate of Census Operations, Manipur (2001) census report the total population of the state is approximately 2,400,000 and there are 33 tribes are stated. Each tribe has its unique qualities of cultures and traditions. People in the state are very creative, artistic skills and talent. They have ability to produce new things in the field of handloom and handicraft. Art and craft products are very abundantly found in the land. Due to this rich tradition of Manipur many people's from around the globe are attracted. Kouna (Water Reed) items, bamboo products, pottery, metal works, doll making, handloom are the major handicraft items of the state. Among those crafts items, Kouna products are also very important handicraft products in the state. Kouna mat has widely produced from Bishnupur, Terakhongsangbi, Kongba Nandeibam leikai, Kwakeithel Konjen leikai, Thoubal and Khangabok mayai leikai.

'Kouna' botanical name 'Schoenoplectus Lacustries (Linn)' is one of the popular craft materials for making mats, bags and other luxurious items. It is a long grass were mostly grown in the shallow wetland places, ponds, canals, river banks and other places where the paddy plants are not suited (Devi, 2017). Manipuri Kouna mat is very famous and popularly used in the entire country. Among other Kouna items, Kouna mat has a significant value to the Manipuri society. Traditionally every household have a culture of keeping Kouna mat on the right portion of the Verandah (frontal space portion of house) during day time and roll up at night. It is considered as an important household item and also related to any ritual ceremony in Meetei community. There is believed that Kouna plant is closely associated with Meetei devine God 'Ebudhou Pakhangba (a mighty god Dragon like head python)'. Because of this believed people are very reserved and restriction of cultivation of Kouna plant. Harvesting of Kouna plant on the day of Friday is avoided by many planters. It is believed that the plant may die or unwanted incident may come to the harvester. Because of this believe this plant is also locally known as Irai-Leima (Goddess of Friday) (Devi, 2017). The variety of Kouna plant grows in Manipur is very unique and it has different qualities in terms of its medicinal values and cultural values. It is echo friendly aquatic herbs and popularly cultivated in Imphal valley. Plantation of Kouna helps to keep ecological balance and home for many organism habitations. Cultivation of Kouna is less investment than paddy and it also reduce labour and cost expenditure. Once it is cultivated it can generate high income. Apart from Kouna craft, Kouna plant has its medicinal value and it is used in many ways related to our health. Chronic fever can cure of using a new Kouna shoot as a medicine. Sitting on Kouna mat is a part of old tradition of Meetei society. There is a belief that sitting on Kouna mat or stool can cure piles. It is also believed that sleeping on Kouna mat can cure back pain and relief stress. Because of this non-toxic, heat resistance and air conditional qualities Kouna mat is best for household item.

Objectives

The objectives of the study are.

1. To study the indigenous handicraft of Manipur.

2. To study the designs, tools and techniques of making Kouna mat.

3. To understand the role and importance of Kouna plant for developing the economy sustainability.

4. To explore the Manipur Kouna product.

Methodology

The indigenous craft material Kouna (water reed) has been selected for the study and being researched on the basis of the background of the material, designs, importance, socio economics and skills of the artisan are studied. Data have been collected from reliable sources. Data can be categorized into two forms.

Primary data: Data has been collected from people those who are practiced Kouna craft through direct conversation with recording, capturing photos of the relevant images. Secondary data: Data have been collected from journals, article and webs.

Cultivation and Harvesting of Kouna plant

Kouna is a type of Water reed. In the earlier time this plant is naturally found in wet places in large scale and the farmers are not much popular of cultivating this plant. Due to its large demand in the market and shortage of raw materials now a day's farmer used to cultivate in the paddy field where the paddy plants are not suited. Kouna plant is very suitable to moderated climate. Normally these plants were harvested three times in a year. First Kalen kouna (summer Kouna) harvested during May to June, second Marak/ Chirak (autumn) Kouna harvested during September to October and Ningtham (winter) Kouna were harvested during December to January. Kalen Kouna is considered as the most profitable and durable. Harvesting on other months has a chance of getting worm inside the plants, having fungus and reduces the quality of having sponge inside the plant. The process of cultivation Kouna (Figure 1) is same with cultivation of paddy plant except seeding. Small baby plant of Kouna is to be cultivated six inches gave between one another. The plant has potential of growing in dry place but water having two inches from the ground level is good suitable for Kouna plant. When harvesting time, farmer used to dry the water first by using water pump or manual method. Then, they used to cut the Kouna plant by keeping two inches gape from the ground level. Due to high demand and shortage of raw material sometimes farmers also used fertilizer for producing more Kouna. But there are many difficulties found in term of materials and their uses. Fertilizer base Kouna has grown faster and looks very mature than normal Kouna plants. To comparison with normal Kouna (Figure 2), the fertilized Kouna has a thin cover layer and sponge content in the Kouna body are very less. Because of this drawback the artisans are facing many problems while making craft items. Normal Kouna has more durable and flexible than fertilizer one.

Figure 1: *Cultivation of Kouna (Water Reed) Plant.*
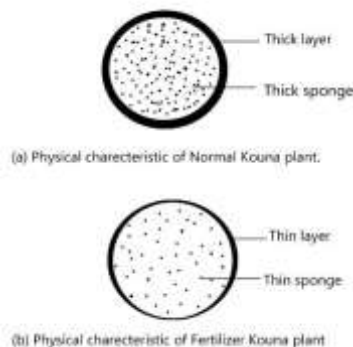
Figure 2*:Physical characteristic of normal Kouna and fertilized Kouna plant.*

Preparation of Kouna plant for making craft items

Preparation of Kouna for making craft items is not an easy process and it is time consumable task. Once the Kouna plant has cultivated it need some important procedure for start making any kind of craft items. After the plant has harvested it needs to keep under the sun shade for four or five days. Then the Kouna tillers are again keeping for dry under the sun light. Duration of time for dryness of Kouna sticks are based on different seasons. During summer season it took 15 to 20 days and in winter season approximately 25 days has taken. When the Kouna was properly dried, the artisan used to select the Kouna base on their colours, thickness of diameter, size and finesse of the Kouna qualities. Selected Kouna sticks are cut together with same size and soaked in water for getting softness quality. Sometime artisan used to dye the Kouna sticks according to their design of the products. They used to dye colour from both natural and chemical colours. According to the demand of the public artisan used to produce more on natural colour. Kouna itself also have glossy beautiful yellow colour when dry. Natural colours can be made from bark of trees or locally available plants. Due to this property Kouna products are considered as the best and safest items among others household items.

Process of making Kouna mat

Making of Kouna items are depend on the design of the product where the artisan has choosen. The process of making Kouna mat was practiced since from the early period. The traditional method of making Kouna mat is still practiced by many artisans (Figure 3). Due to the high demand of Kouna mat in the markets now traditional style of weaving machine also invented by inventors. But majority of artisan used the traditional method. More than 4 lakhs people in the unorganized sector are engaged in the state crafts industry and more than 180 items are made using Kouna. Apart from traditional method the manual machine (Figure 4), which can even be operated by a low skilled worker or a physically challenged person.

Figure 3: Traditional method of weaving Kouna mat.

Image source: *https://milaap.org/stories/phaksaba*

Figure 4: *Manual machine of Kouna mat.*

Kouna mat tools are very simple tools. They are all easily available materials. Long jute thread, Bamboo stick, wooden panels were used. According to the size of the mat the artisan used to keep numbers of pair thread in parallel (Figure 4). Bamboo sticks were used to tide the Kouna stick at the initial and end of the edges. While designing the products, the artisan used different motifs, pattern or texture by using basic tools and they used to tame a strand of Kouna into place. Artisans also used to make double weaving technique. This type of weaving technique is very complicated and it is made only by the skill artisan. Here some of the Kouna mat designs are showing in the below figure.

(a) Chamlon plain Phak (Plain design mat).

(b) Mayek thokpi phak (with design mat)

(c) Moirang Phijang hakpi phak design.

(d) Moirang Phijang haidokpa phak design.
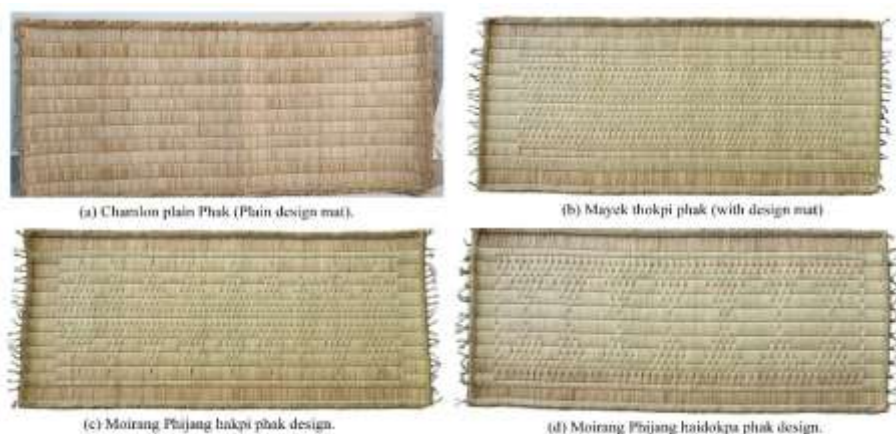
Figure 5: *Different designs of Kouna Phak (Reed mat).*

Chamlon phak (mat) is a normal mat used in every household of Manipuri community. This type of mat has been made and practiced since from long time. There is also a small single seated chamlon phak, this type of mat is used only in the ritual or in the religious purposes. The other mat designs are the modern concept designs and they are usually connected with Manipur traditional textile.

Economic aspect

Basically, the Kouna products are produced and mainly practiced by women folk in Manipur. Since from the early time there was a tradition of weaving and making small skill base craft were practiced by women. These women weavers continue themselves for their livelihood and development of micro enterprise in the state. At the beginning these items were prepared only for their household purposes. Later on, because of the popularity of the products and market demand the products have been sold throughout the globe. Kouna crafts are important craft items among others craft. This plant has not been a popular plant at the beginning because this plant has been widely grown as a wild plant in every corner of the state. Because of its dynamic usability now this plant used to cultivate in different part of the entire state. The price of the Kouna mat depends on its size and design. It ranges from Rs. 300 to 950 in local market and Rs. 1500 to Rs. 3000 at outside market. Basically, a normal mat having no extra design can make one or two in a day by a skill person. A skill woman has a capable of making two to three mats in a week. Every woman of the family has engaged in Kouna mat making job for their family generating income in rural areas. The income generated from selling Kouna product is supported economic activity of their family and it also enhances employment opportunity to the young generation. Production and selling items have been carried out by the crafter itself in the early time. But now a day's many collectors, Entrepreneurs, business minded people used to collect items from the craft makers and they connect to the market inside and outside.

Conclusion

Manipur has a rich and culturally diverse scope for crafts. Handloom and handicrafts are the key important sectors of the state. The unique feature of Kouna plant is that it is not easily available in other states or countries. This plant is widely used by local artist. Making of Kouna Craft took an important role for uplifting the socio economy in the Manipur society. Even though, the state has been facing several problems in terms of unorganized marketing, lack of investment and inadequate support mechanism etc. In other case due to the high demand of the Kouna products, harvesting of Kouna plant and use of fertilizer has increase day by day. This may lead to decline the growing of Kouna plants in the state. Now it is time to give awareness among the Kouna cultivators regarding the conservation and protection of this plant. On the other hand, mostly the craft makers are belonging to poor family. For the recognition of their skill government must take initiative for the welfare of the local artist. For example, giving grand in aid, fellowship, loan etc. will be helpful to the artisan. It is necessary to look both the craft makers and conservation of Kouna plants is very much important in the state for becoming an economic sustainability.

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Landscape Expression in South Indian Villages- A creative Study

Gayathry.D & Sheela.B

Abstract

Villages and agriculture play a vital role in a country's growth. In villages, we find purity of everything. There isn't any smoke, pollution, or noise. Fresh air, which we never find while living in cities, is abundantly available to the villagers. The word village itself denotes power. It is rightfully referred to as India's backbone. Agriculture in the village was once reliant on nature and manpower. Then it became mechanized according to the development and growth of population. This is caused to the fact that over time global warming, monsoon change and the proliferation of other industries have turned arable lands into residential areas and factories. Thus people started abandoning agriculture and migrating from the village to the city. (Gale, 2018) It is well known that the agricultural products available through chemical fertilizers by the technology of modern times cause various diseases and ailments to the human race. However, we must recognize that technology and machinery will become more prevalent over time. At the same time, no one can dispute that people have rediscovered their passion for the picturesque village life.

The history and culture of a generation can only be known through the art and artifacts of that period. As an artist, and a citizen of India, through my art I should assist in preserving nature to give a natural life gift to the future generation. They want to live without natural calamities. During the village visit, outdoor spot painting will be done to explain the village beauty and this will be experimented with watercolour painting. The researcher art works will add value to aesthetic resources and also give urban art enthusiasts a nostalgic sense of their own villages or a new imagination.

Key words: Villages, Agriculture, Painting, Preserving Nature, Village aesthetic resources.

Introduction

"Look deep into nature ....And then you will understand everything better" Albert Einstein 1951(Anonymous, 2022)

Villages have been slowly evolving since the earth appeared. Villages are what remain and remain unchanged in nature. The villages themselves have been transformed into cities. The proximity of villages and the proliferation of cities are inevitable in the present situation. All of the city dwellers presently are really villagers. The memories of the village will be immortalized in the mind of every man at the forefront of the city.

India, with its beautiful landscapes, is mainly an agrarian economy. The current villages, with the remaining 34.93% living in 7,935 cities and urban areas (2020). In terms of South India, the Western and Eastern Ghats each have a number of scenic villages.

We get our daily food like rice and wheat from the villages itself. Besides, the village is also a source of essential commodities like sugar, honey, tea, coffee, milk, oil and wood. Our lifestyles necessitate a large number of things. The progress of a country is not in the destruction of villages. Cities and villages need to work together to bring about significant change. The credit for ecological balance goes to the villages, where the trees absorb the pollution we produce in the cities. India's best leaders like former

186

President Dr. APJ Abdul Kalam, Lal Bahadur Shastri and Narayan Murthy are all from the villages. This demonstrates the need to harness the vast intellectual potential of India's villages.

In the current environment, nature may be on the verge of disappearing. The invisible enemy is global warming. As a result of climate change, agricultural lands are being destroyed population of India is 139.62 crores. Approximately 65.07% of the population lives in 6,64,000 and the charm of the village is being destroyed. Serious human needs have become a problem for all living things. Humans, like other creatures, have forgotten that they are a social race that is part of the environment.

Expressions of villages offer a variety of expressions to show its beauty. Village emotions include fields, trees, rivers, houses, animals, designers, ox carts, lakes and innocent faces. The beauty of the village spreads its wings in various ways. It should be made known to city dwellers. It sayings are generally entertaining. People will never miss the opportunity to see something amazing.

As an artist, I hope that my art will contribute to the documentation of nature in order to give the gift of natural life to future generations. They want to live in a better world without natural disasters. The exterior point will be painted during the village visit to illustrate the beauty of the village, and this will be experimented with water colour painting.

Literature Review

All products or objects are provided by God in their natural state, which is pure, healthy, and colorful. However, we are unaware of their significance and destroy them in the name of "Modern Lifestyle." In his quotation, Mahatma Gandhi, an Indian statesman and the Father of our Nation, says:

"Today cities dominate and drain villages so that they are crumbling to ruin". (Harijan -1937) (Joshi, 2022)

It is our responsibility to protect the village for future generations. Bamboo and clay are used to build Indian village houses, which are good for the environment. Most of the houses in Indian villages are made of bamboo and have thatched roofs. The walls and floors of the slums are covered with a mixture of dirt, grass and cow dung. Bulls are used in agriculture and other

field activities. Women sow rice paddy, men pull bullock carts, plow fresh soil, and so on. The main sources of water are river water, wells and hand pumps. The way people live in rural India varies from region to region. They don't want a big house, car or big sum; what they have to live a happy life. That is why they are so happy and healthy. Tamil poet Bharathiar sang about the value of village life in one of his poems:

"I need a small piece of land , Oh divine mother , A small piece of land, and there, In the midst of that small piece of land you should build me a house with, Four pretty pillars and several" (Anonymous, 2011)

It is my responsibility as an artist to raise awareness about environmental protection using painting and drawing. The beauty of nature, fresh air and fresh water amaze me in the village. The greenest picture in the world. God has given us amazing creations. We must live in harmony with nature and find satisfaction in our lives. Join us to save the nature....

Methodology

1. The beauty of the village will be painted on the spot.
2. Interview will be conducted with the people of the respective villages.
3. Discussion will be conducted with the farmers.
4. Art works will be displayed in rural places.
5. By using those paintings, the importance of village life will be clearly explained and it can motivate them to take care of the nature and beauty of their village. So, those paintings will motivate them to continue their profession as farmers.
6. Art works will be displayed in urban and cities. By displaying my paintings in the city, people will be reminded of their villages and gain a better understanding of the importance of agriculture. As a result, I will raise awareness of village life and agriculture that is in tune with nature.
7. The beauty of the village shall be documented through electronic media such as video and photography.

Artistic Influence

I have been inspired by the following well known artists who specialized in landscape paintings in various mediums.

• Vincent Van Gogh-(Figure: 1)

• Joseph Mallord William Turner-(Figure :2)

• Milind Mulick-(Figure:3)

He was a well-known proponent of the impasto painting method (Sonya, 2012), which involves a thick application of paint to a specific area of the canvas. Brushstrokes are more obvious with this approach, which also provides roughness when the paint has set. The use of impasto in his work had a significant impact on lighting, with the raised, almost three- dimensional surfaces of his paintings appearing differently depending on the source of light.

Figure 1:Vincent Van Gogh,Wheat Field With Cypresses, oil painting, 1889.

Figure 2:Joseph Mallord William Turner, English village scene with cattle, oil painting,1840.

He is an artist who works in both oil and watercolours. His watercolour drawings influenced his oil painting technique later on. He began to utilise oil paint in a translucent manner, akin to the effect of watercolour, which aided in the development of his unique style. He employed both bright and dull colours in his paintings. His paintings are very amazing.

Figure3:MilindMulick, Landscape, water colour,2000. He is an artist who works in acrylics and watercolours. His subject is landscapes, villages, city life, streets, rainy day sceneries, and so on. In this painting, he worked primarily with warm colours such as orange and red, spreading thin layers of light colours and gradually transitioning to darker layers to give the figures depth.

My Creations

I have been influenced by the works of the aforementioned artists but my works are different from these artists. I will not be an abstract artist because abstract ideas do not appeal to the general public. My paintings are simple and elegant. My artwork will appeal to people of all ages and backgrounds. This would be very realistic. Even the uneducated people can understand the meaning of my artwork.

I love painting with watercolour and enjoy during my work is lively. I get excited when the audience is thrilled I have used this medium to express my feelings by emphasizing light and dark tones and weaving extraordinary effects into my imagination. Colour mixing and spreading can sometimes create unexpected, unique and wonderful effects, which makes me very happy. All of my works have received my full attention and commitment. Although India is a warm country, I have created realistic paintings with sunlight and shadows.

My Art Works

These are the village paintings that I created to express my feelings about the beauty of nature.

Figure 4:D.Gayathry, Plough, Water Color on Canson sheet 2020. The hoe, a plough (Figure: 4) instrument used by farmers, loosens the soil before ploughing or cultivating

the field, as well as before sowing. Through my mind's eye, I see a wonderful sight of a farmer ploughing using that equipment. I have combined it with my creativity and used it to create this artwork. I also drew a farmer's and a bull reflection showing on the water.

Farmers reach at the agriculture field early in the morning to do transplantation (Figure: 5) the sun shines with yellowish tone, reflecting their dress colours on the water, creating a lovely scene. That type of art was created by me, and it will always hold a special place in my heart and spirit. I'll remember this painting for a long time.

Figure5: D.Gayathry, Transplantation, Water Color on Canson sheet, 2020.

Figure6: D.Gayathry, Weeding, Water Color on Canson sheet, 2020.

After seeing this scene, I believe it is gorgeous. I like to paint, so I have been observing the people weeding (Figure: 6) in the fields between them. This means clearing unwanted vegetation from the field near the paddy field. Throughout the hot weather, they were engaged in all of these tasks. I painted that in a painting mode.

Figure7:D.Gayathry, Harvesting, Water Color on Canson sheet. 2021.

Harvesting refers to the act of cutting and collecting the stalks attached to the stalks in paddy. Harvesting (Figure: 7) is usually done with a sickle. It featured men and women singing songs and cheerfully reaping the harvest, oblivious to the workload.

Figure 8: D.Gayathry, Pongal festival, Water Color on Canson sheet, 2021. Villagers always place a higher value on culture than city dwellers. Pongal festival (Figure:8) the day is observed as a good opportunity to express gratitude for the rain, sun, and cattle that assist us on a daily basis. Pongal festival is used to worship God in households and temples on this day. This image exemplifies their culture.

Conclusion

It is critical that our villages be safeguarded in order to avert food shortages. There are no humans because of the lack of immigration. My research in the South Indian village will be conducive to rural development. The researcher's artwork will add value to the village's resource conservation efforts. Those who buy my works will also raise awareness of the importance of the village and the need to protect it. Furthermore, our Prime Minister Narendra Modi has taken some steps for the village, namely the "Sansad Adarsh Grama Yojana" (2014), which is a rural development project that focuses on promoting community development, cultural development, and among the people. Community mobilization of the rural community and their development. This study is not only an attempt to address a topic but rather to improve public awareness.

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Life Story of Kondapalli Artisans

Impact of COVID-19 on Lives of Kondapalli Artisans

Venkata Murali Kesaboina & Vishweshwari Tiwari

ABSTRACT

We have a rich and diversified culture and tradition in the history of India. Among all the traditions, craft tradition has a strong impact on Indian culture. As per the recent study nearly 10 million people are directly dependent on the craft industry for their livelihood in India. And millions of people indirectly depended on the craft industry whose occupations are related to handmade wooden products. These rural industries contribute almost 10 percent of the employment share. Various secondary sources of newspaper articles, research articles, websites, blogs, etc., supports this study to understand and collect the information about the life story of Kondapalli artisans. "Kondapalli Toys" is one of the crafts which is giving livelihood to the rural artisans of Andhra Pradesh. Kondapalli is a small village near Vijayawada in Andhra Pradesh state. A colony "Bommala Colony" by name was set up in the year 1987 by former Andhra Pradesh chief minister N.T. Rama Rao near Kondapalli where the artisans reside and wooden craft is practiced for their livelihood. The toys are made up of lightweight softwood called White Poniki. Kondapalli craft is considered a cultural icons of Andhra Pradesh and one of the most sold handicrafts in India and abroad. This wooden handicraft industry provides employment to a large number of people next to agriculture. This paper will talk about how art and craft is being suffered due to drip in the business due to various significant reasons and the present scenario of life of Kondapalli Artisans. This paper also discusses how the covid-19 ruined their plans and thoughts, and affected their business. The Covid-19 situation created a slump in the business of Kondapalli toys. Many of these rural artisans procured lots of material for their upcoming business and to earn profits, but due to Covid-19 situation there was a sudden lockdown which made their efforts go wasted and they could not do any kind of business.

KEYWORDS: Kondapalli Toys, Traditional Art Form, Wooden Toys, Handicraft, Kondapalli Artisans, Covid-19.

INTRODUCTION

The Kondapalli Artisans suffered a lot due to loss in their business in the lockdown of 2020, Covid-19 made their lives miserable where none of the customers coming to buy their products.

ORIGIN AND HISTORY: India has a rich culture and heritage with the tradition of handmade wooden toys. It was evident that this tradition of toys even existed in Indus valley civilization. We can find many clay toys of animals with moveable heads, monkeys that slide around a stick and skillfully done toy carts from the important sites of Indus valley civilization Harappa and Mohenjo-Daro. The traditional handicrafts are generating international revenue and also a source of rural employment in the country. Children will learn many things like mysteries, traditions and faiths from toys before they enter into adult life. Kondapalli and Etikoppaka are two major traditional toy crafts in Andhra Pradesh.

Fig.1. Woman coloring Kondapalli Toys Courtesy: The Hindu.com

When we look into the history Kondapalli Artisans migrated from Rajasthan to Kondapalli in the 16th Century when the ruler Annavemareddy brought some of these community people to build sculptures in the temples in his dynasty. The Artisans are referred as Aryakhathriyas which is mentioned in the Brahmanda Purana. They belong to Muktharishi origin, a sage endowed with skills in arts and crafts by Lord Shiva. It is understood that the craft is so old and dating back to 400 years and passed the art form technique from generation to generation.

Kondapalli is a small village 15 kilometers from Vijayawada. Because of the wooden toy craft this place has become so popular. The name of the village is spread to other countries because the products are sold in India and abroad. In kondapalli people have been practicing this toy craft for 400 years. Here there is a colony called Bommala colony where craftsmen make the toys for their livelihood.

The Kondapalli Toys are seen everywhere in the world and all Telugu people are very well acquainted with Kondapalli toys. White Poniki wood which is soft in nature is used to make these toys and it is available in nearby forests. As this craft is very traditional, passing from generation to generation, craftsmen will be fully involved, in making toys with utmost care. Telugu culture and tradition are reflected in the toys they make. Sometimes they face challenges while procuring raw material. The materials used for wooden toy making are Tella Poniki and Ankudu wood. They also used subsidiary materials like aluminum, zinc, waste coir and cotton, kewada leaves, sawdust, etc. The number of craftsmen practicing this art drastically came down and there are only 30 to 40 families that undertake this as their livelihood.

S.No.	Artisans	Impact of Covid-19	Loss incurred
1	Venkat Reddy's family	Loss of elderly person	Finances and psychological trauma
2	Nageswara Rao's Family	Education of children back stay	Education disturbed
3	Sampath's Family	No business	Finances
4	Anand's family	One of Family member could not visit hospital	Health deteriorated

Impact of Covid-19

Figure 2. Themes of Themes of the toys Courtesy :voubs.com

The themes of these toys are scenes from Hindu Mythology and rural life of Andhra Pradesh like Churning Milk and Curd, Bullock Cart Riding, Elephant Ambari, Dasavathar set, RadhaKrishna combo. The toys are small in size and narrative in nature. In Kondapalli Mythology and village scenes are common themes for carving toys. Currently Lepakshi (AP government) and a few private merchandisers help in procuring toys.

Tools and Raw materials: Wood: Tella Poniki wood is soft in nature, available in local forest, Chisel: Different types of chisels and files are used to cut and carve the wood. Aakra Paste: Aakra paste is locally made using a mixture of saw dust and Tamarind seed powder, which acts as adhesive and used to fill gaps and give shape to the toys. Colors: Vegetable dyes and enamel paints are used to color toys.

File: used to smoothen the surface of the toy. Paint Brush: Different sizes of paint brushes used in color filling and sketching process.

Toy Making Process: The wood which is used for making Kondapalli toys is called "Tella Poniki" or white sander wood and this grows abundantly in local forest. Tella Poniki is very soft and light in nature that is the reason it is chosen to make wooden toys. The wood is treated by warming as the weight of the wood reduces to one third of the original weight. After treating Tella Poniki timber is cut into required blocks. The design is marked on the surface of the wood initially; the wood blocks are carved with chisel into the desired shape of the toy. Then the chiseled components are filed to remove uneven edges. All the pieces like Body, Head, Ears, Trunk, and Tail are carved separately and fitted together with glue and a slow process of heating on a wire frame is done to evaporate the moisture. After carving is done the early prepared Aakra paste is applied to the toy to fill the cracks and also to give proper shape of the toy. The toy is dried and then smoothened by rubbing it with sandpaper. Once the surface is smoothened, it is sent for the coloring process.

Fig.3. Kondapalli Toys making process Courtesy: www.Aljazeera.com

Fig.4. Tella Poniki wood Courtesy: www.Aljazeera.com

REVIEW OF LITERATURE

According to Girija Kumari K V (2001) India has a glorious tradition in toys and the most beautiful part of Indian handicrafts lies in its toys and dolls. Kondapalli toys in Andhra Pradesh are very rich in its range. The themes of toys are rural life, single figure deities, especially ten avatars and extremely popular. The article of Timesofindia.indiatimes.com July 2020, says the Kondapalli toy craft is seriously at risk as many of the artisans are planning to leave the craft and go to other places in search of their livelihood as business is paralyzed due to Covid-19 lockdown. They had absolutely no business in the lockdown time business was zero and liabilities were piling up many artisans already shifted to Vijayawada and Hyderabad in search of jobs. Some people joined as skilled unskilled labor in nearby various kinds of industries, some people migrated to Hyderabad and joined in private services. They have procured large amounts of raw material before the lock down and there is no hope of getting profits in this situation as Mr. Ananda Kumar, a craftsman, told Times of India. Another craftsman, Mr. S. Nageswara Rao explains that their business largely depends on the tourism economy, with the support of the tourism state department and getting GI tag Kondpalli toys started getting online orders but that is also stopped because many governments say that these are not essential commodities. Mr.Roa also said if things continue like this the entire indigenous art form of Kondapalli toys may disappear from the place it was born.

As per the www.thehindu.com (15th August 2019) tells us a different story that though the Kondapalli toys growing in popularity but creators are neglected lot, and also says Kondapalli toys - cultural icons of Andhra Pradesh and it is the most selling handicrafts in and other countries across online, wholesale and retail platforms. A store official at the Lepakshi Handicraft Emporium said that the toys attract great business and earnings would be 4 to 5 lakhs a month. But Artisans have a different story though they have platforms like Amazon, My State Bazar to promote this craft they helped barely in their sustenance.

As per Mr. Swamy S. (2017) our country has a history of rich and diverse cultural traditions. India's craft culture always occupies a special place among its diversity owing to its beauty, dignity, form, style and aesthetics. It is almost like writing about the country itself when you write about Indian Handicrafts. The versatility of the various materials used in Indian handicrafts items, such as wood, stone, metal, grass, glass, cane and bamboo, textiles, clay, terracotta and ceramics, makes these products truly unique. T.M. Abraham wrote: "the world of art and craft is as valuable as the world of science, philosophy or ethics. Like art, crafts reflect the state of human society through the individual. Craft treasures like art give us a glimpse into the core and kernel of the collective mind and societies through the mirror of the individual mind that created them." P.K. Aggarwal, R.V.Rao and S.C. Joshi (2013) says the industry of

toy-making is an integral part of India's rich cultural heritage, but action is needed if it is to prosper. This paper also reiterates in his writings that toy making was part of our culture and tradition as it was started with Harappa and Mohenjo-Daro civilization almost 5000 years ago. In India today the wooden toys are manufactured by traditional artisans depending on the availability of raw materials. One of the challenges faced by artisans is raw material scarcity. The wooden toy industry is facing acute shortage of many species of wood which are useful for manufacturing toys due to overexploitation, because of this the prices of the wood are rising up hence many artisans are leaving the profession. And also artisans complain the prices of raw materials are increasing day by day but the prices of their products remain the same.

The Hans India article (31, August 2020) says the wooden handicraft of Kondapalli is on the verge of extinction. There are mainly three reasons for this insufficient availability of wood, drastic fall on the sales, economic and financial related burdens and issues. The artisans are unable to see the revenue in this work and they urge the government to intervene and help and support these people so that the artisans keep the age-old art form from perishing. Insufficient income levels are affecting the Kondapalli artisans to lose interest in continuing the profession.

Muppidi Rambabu, Dr. Ananda Kumar Rajan (2020) wrote in their paper that as per the recent study nearly 10 million people are directly depending on the craft industry for their livelihood in India. And millions of people indirectly depended on the craft industry whose occupations are related to handmade wooden products. These rural industries contribute almost 10 percent of employment share. "Kondapalli Toys" is one of the crafts which is giving livelihood to the rural artisans of Andhra Pradesh. Kondapalli is a small village near Vijayawada in Andhra Pradesh state. This paper also says that the toy making craft of Kondapalli has been in the industry for 400 years, and there is a colony in Kondapalli for toy makers. These artisans make kondapalli toys traditionally and attractively.

Artisans preserved this tradition and art skills which they inherited from their ancestors. All the members of the family involved in the toy making. The wood used for Kondapalli toy making is called Tellaponiki and this white wood is found in the vicinity of Kondapalli forest near Ibrahimpatnam. The raw material supply is a major problem, and the raw materials used for traditional toy making are into two categories, Tella Poniki, Ankudu wood fall into the basic raw material from which toys are made into one category and subsidiary materials like aluminium, zinc, waste coir, cotton, mogali leaves, saw dust, ochre, orpiment, chalk powder, gums and pastes, gurjan oils, natural colors fall in to the second category.

Prasad, P. Rama Chandra; Rajan, K. S.; Kumari, J. Asha(2011) discussed the risk caused due to the residual forest patches of Eastern Ghats of Andhra Pradesh. This paper discussed the importance of Kondapalli reserve forest and there is an urgent action needed to protect these forests before they go into phase of extinction.

Sanjiv Singh Bhadauria (2017), he discussed how Geographical Indications has emerged in important intellectual property rights. This paper made an attempt to discuss broader issues related to the concept of Geographical Indication in Indian Legislation. Also discusses how various handicrafts got their Geographical Indications tag along with Kondapalli wooden toys in Andhra Pradesh. Registration of

Geographical Indications held for Kondapalli Bommalu Handicraft in between April 2007 - March 2008.

OBJECTIVES OF THE PAPER

To analyze the difficulties faced by artisans in the context of the present scenario of Covid -19 pandemic. To identify government policies already existing for the upliftment of the craft sector and to help the artisans who are practicing the wooden craft in various parts of India. Need to analyze policies connected with disaster management and improving its implementation method and it is required to be acted fast to help these artisans financially when there is no sales. To identify other government bodies, cooperative sectors and NGO's to enhance the living conditions and build a productive environment for craft communities.

DATA SOURCE AND METHODOLOGY

Data obtained from Primary and secondary sources. Personal interviews and direct interaction with the community and various secondary sources of newspaper articles, research articles, websites, blogs etc., to support this study, to understand and collect information about the life story of Kondapalli artisans.

FINDINGS

The Kondapalli Toy craft is toiling for sustenance. Chinese machine made toys are flooding to the country, this has become a major competition and obstacle for Kondapalli toys. These artisans spend 10 to 20 hours-a-day to make miniature dozen miniature buffaloes that are sold for Rs.300. Though they work hard to make these toys, sustaining themselves in the competition became a major challenge. Earlier they would easily earn Rs.2000 per day but now earning Rs. 500 has become a difficult task. Scarcity of 'Tella Poniki' wood is also a trouble for these artisans. By knowing the reality of Tella Poniki scarcity the Forest Department had set up a 'Wood Bank' to grow the softwood trees and to distribute them legally among the toy makers. The Forest Department is spending nearly Rs.2.85 lakh every year for the purpose of growing trees in Kondapalli Forest. These trees would be providing wood to the toy makers for the next 20 years. But some toy makers complain that the Tella Poniki takes more time to grow and also they say it is not easy to grow Tella Poniki like other plants because the wood is sweet, it falls prey to many pests and it requires immense nurturing. The government required to sanction funds regularly from time to time and at the same time impart training to the younger generation.

Government assistance intervention of Design where in artisans experiment with current trends, adopt assimilate and create new designs. Then it is possible for these artisans to work towards making the craft regain its lost glory. Recently to help these artisans the Vijayawada M.P brought them under the fold of National Institute of Micro, Small and Medium enterprises (NIMSME). Rs.1.85 Crore funds have been sanctioned under the central scheme recently to train their skills and to upgrade their living standards. As per this scheme 90% of the cost will be spent by the Central government and remaining 10% is to be borne by the artisans. Even this 10% cost also cannot be afforded by the artisans Rs. 42.50 lakh funds allocated from Member of Parliament Local Area Development Scheme. Under the SFURTI (Scheme Fund for Regeneration of Traditional Industries) which was launched by the Ministry of MSME,

a new society building is being constructed and 'Kondapalli toy-Makers Association' society has been formed.

CONCLUSION

All the Artisan family in Kondapalli faced a major financial and health wise draw back. Among the significant reasons drip in the sales due to Covid-19 pandemic is one of the main reasons. Scarcity of the wood and raw materials, competition by the Chinese machine toys are some of other reasons for low living standards. The

artisans majorly the elder /chief crafts person wanted the next generation to get in to jobs /careers that would fetch a regular salary as the profession was very uncertain. They wanted their children to get in to IT sector, Banking, Govt., Jobs Teaching etc. Many artisans are shifting to other professions or jobs by leaving this craft in search of a better living style due to these reasons. There are many such regional wooden toy makers in India which are facing problems to sustain in the Industry due to various significant reasons. It is necessary to identify problems help the toy making industry to save these crafts from extinction. Actions need to be identified to make the handicraft industry sustainable. There is a need to provide technological support and training, including in social and design trends. The government needs to establish training centers to improve the skills base including manufacturing and marketing. The forest department needs to conserve natural forest used to supply the raw material to the sector and bring them under sustainable management. It is time to encourage use of alternative plantation grown species suitable for the sector. Wooden Toy makers require assistance to upgrade their skills and to face the competition internationally in the toy market.

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Lost in Translation or Relevance? The Art of Dressing from Ancient Text and Sculpture

Mridula Anand

ABSTRACT

Sculptures of dancing forms on temple walls show intricate craftsmanship as they stand bedecked in beautiful costumes and ornate jewellery. Given that dance is a visual art and aesthetics play a major role in engaging with an audience, the costume and jewellery associated with dancers have gone through a sea change. While these sculptures as part of heritage are records of historical importance, they also paint a societal picture and record styles, jewellery and tastes of that era. Given the rich knowledge and details that have been captured not just in these texts, but also in sculptures, it becomes an important record to understand the nature of how society was structured and functioned at that time frame. This helps in understanding what culture and heritage loss happened as these records were either forgotten or passed on. Unique art designs, clothing textures and jewellery usages are already lost to the present generation due to loss in perpetuation. A look at the various and detailed aesthetic sensibility on decorations and jewellery can give us better insight into the culture and heritage of those times and possibilities of conserving it for the future. However, by studying these heritage sites as well as art documents, we can understand and bring forth forgotten ideas that might improve present day living. Therein lies the challenge.

Keywords: Indian classical dance, dress, culture, Bharatanatyam

INTRODUCTION

Dance is very much a visual experience. Consisting of a structured and extensive movement vocabulary and vocal accompaniment, classical dance rests on a framework defined and refined over years of teaching and practise. For those who have learnt from traditional teachers who in turn had their training from practitioners from a dance lineage, the training depends on frameworks set through oral traditions with scant records. However, multiple treatises on dance, music, drama and arts have provided in depth records of various practises of their times but more importantly, a path to follow for present day practitioners of art.

FIGURE 1*: Dancers in sculpture. Source- dreamstime.com*

One such voluminous record of the jewellery and dress of those times is the Natyashastra-an ancient Indian Sanskrit text on performing arts. Encompassing dance, drama, music and poetics, the Natyashastra details drapery and decoration and is a

pointer to the existing milieu. This text has given dancers a peek into history while modern day dancers have absorbed and imbibed these styles into their current performance. The work is attributed to author Bharat Muni or Satyasahasri who created this encyclopaedic work for the codification and preservation of Indian social and cultural history.

Natya- shastra literally means dance-study. However, it is not restricted to dance and encompasses dance, drama, music and poetics as well. It features the model spectator, stage decorations, lighting, dance, musical tone and many more. Spanning 36 chapters and more than 6000 verses, the Natyashastra covers an encyclopaedic range of topics such as structure of a play, movement, construction of a stage, make up and costumes and even music. It projects new features of fine art and provides new insights and trajectories on understanding audience behaviours and engagement. Further, the Rasa theory elucidated in Natyashastra is a major contribution in understanding behaviours, emotions and reactive behaviours. It also gives an account of sentiments (Rasas) and emotions (Bhava), histrionic representations (Abhinaya) and mental states (Sthayi). Thus, we see a deep understanding of philosophy and human behavior as well as different psychological states of both performers as well as audiences.

CHAPTERS OF NATYASHASTRA

The Natyashastra outlined many aspects roughly divided into 36 chapters. The Natyashastra systematized drama and theater when it was in its nascent form. This most probably arose when an interest in dance, drama and music among people developed and it was thought necessary to formulate theories and systematize knowledge relating to them- almost a code of conduct. Thus, this separate discipline - a delight to the eyes and pleasing to the ears, was born. It begins with the outer and spatial arrangements of the stage, the theatre building and audience seating in Chapters 1-5. The important Rasa Theory and moods and emotions are dealt with in Chapters 6-7 while the physical acting techniques are outlined in chapters 8-13. The Chapters 14 through 19 deal with sound, speech and music and the structure of a drama is discussed in Chapters 20 & 21. Music is largely focussed on in Chapters 28-33 and then the last few chapters return to focus on divine origins of the art. However, of interest are Chapters 22-26 which concentrate on costume, make-up and decorations. (Vatsyayan, Kapila;1996)

Nepathya

Interest in performing arts has not waned. However, the number of practitioners and performers has mushroomed leading to an overdose of arts in every street corner. Hence, the ability of audiences to stay engaged to any performance requires thought and aesthetic sensibilities of the artists. A text on drama would touch upon aspects that would make the drama more relatable to an audience. Given the limitation of a play to textual elements that can be seen or heard by an audience through dialogues and movements, the emotions and reactions of the characters of the play need to be etched well. Hence not just literary aspects but significant performative aspects also enhance the experience. Bringing a drama or performing art to life requires multiple aspects of dramaturgy to be worked on. Which brings us back to the chapters of the Natyashastra and the detailing.

The chapter on make-up and decorations indicates the importance of accessories as well as the kind of accessories to be used. This serves as a reflection of the real life

scenarios of decorations used in that region and society. Detailed categorization about decorations into garlands, ornaments and drapery as well as pointers on their use indicate a deep understanding of its uses in society. This provides an interesting window into the past as dancers and theater actors scour through the chapter to understand and assimilate what worked then and what could work now.

The Natyashastra minutely details many aspects which are and can be used by artists for a better performance. In the chapter on costumes and make-up, the detailing given to stage decor and the types of make-up for each character have found their way into present day performances.

According to Bharat Muni, there are four kinds of costumes and make-up- model work (pusta), decoration (alaṃkāra), painting the limbs (aṅgaracanā) and [the use of] living creatures (sañjīva). Model work, such as hills, carriages, palaces, banners and even animals constructed for use in a dramatic performance are can be of three kinds- the joined object (sandhima), the indicating object (vyājima) and moving object (ceṣṭima).

Sandhima Mat, cloth, skin	Vyajima Mechanical device	Cestima Moving objects
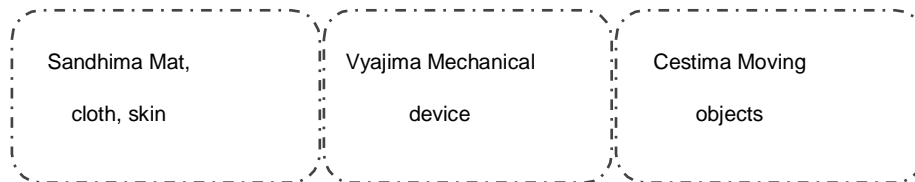
Decorations (alamkara) for the stage and performer are garlands, ornaments and drapery. Garlands are of five kinds: encircling (veṣṭita), spread-up (vitata), grouped (saṃghātya), knotted (granthima), and hung-down (pralambita). Its relevance is seen when, even today, the use of garlands adorning women's hair on festive occasions can be done in these various ways especially in a Gajara (knotted or hung down garland) or Veni (grouped type of garland). Another decoration the Natyashastra elaborates on are ornaments.

Ornaments are of four kinds as well depending on how they are worn- piercing the limbs (āvedhya), tied up (bandhanīya), worn (prakṣepya), and put round (āropya).

FIGURE 2*: Female dancer with ornaments, ornaments used for performances*

Table 1*: Types of ornaments in the Natyashastra*

Piercing ornaments	ear-rings (kuṇḍala)
Tied-up ornaments	girdles (śroṇī-sūtra) and the Aṅgada (arm-band)
Worn ornaments	anklets (nūpura), apparels
Put-round ornaments	golden neck-chain (hema-sūtra)

The ornaments are further classified according to those worn by males and females.

The ornaments for males consist of

➢ Head - crest-jewel (cūḍāmaṇi) and the crown (mukuṭa)

➢ Ear - ear-ring (kuṇḍala), Mocaka (ear-pendant)and ear-top (kīla)

➢ Neck - strings of pearl (muktāvalī) the Harṣakaand the [gold] thread (sūtra)

➢ Finger - finger-ring (aṅgulīya-mudra)

➢ Forearm- Hastavi and the Valaya, Keyūra (armlet) and the the Aṅgada (arm-band)

➢ Wrist - bracelet (rucika)and the Cūlikā

➢ Waist - golden thread (sūtra)

The ornaments that aided performers in enhancing their presence on stage are still in use today. Present day male dancers use the ornaments of the ear, neck and waist in performances. While the ornaments are used to enhance the aesthetic appeal in male performers, their ornaments donot ascribe to any particular character.
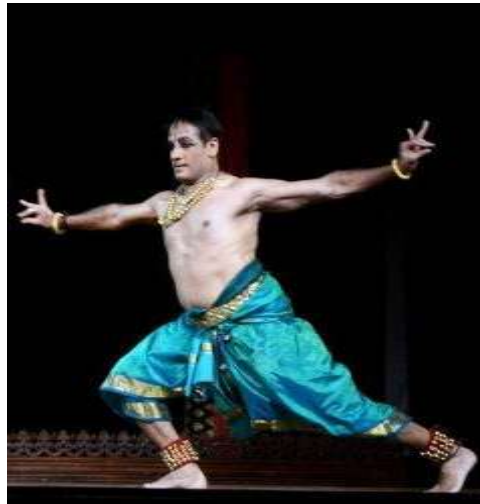
FIGURE 3*: Male dancer with ornaments. Source- Sathyanarayana Raju*

The ornaments of females are more elaborate.

➢ Head - Śikhāpāśa, the Śikhāvyāla, the Piṇḍīpatra, the Crest Jewel (cūḍāmaṇi), the pearl-net (muktā-jāla) and hair-net (śīrṣajāla)

➢ Ear - Kuṇḍala, the Karṇikā, the Karṇavalaya, the Patrakarṇikā, Āvestika, the Karṇamudrā, the Karṇotkīlakā (ear-top)

➢ Neck - strings of pearl (muktāvalī) the Harṣakaand the [gold] thread (sūtra) two, three or four strings

➢ Arm - bangles (valaya)

➢ Finger - finger-ring (aṅgulīya-mudra)

➢ Forearm- Hastavi and the Valaya, Keyūra (armlet) and the the Aṅgada (arm-band), Kharjūra, Ucchitika, Kalāpi, and the Kaṭaka

➢ Wrist - bracelet (rucika)and the Cūlikā

➢ Waist - golden thread (sutra

➢ Hip - Kāñcī [a girdle] of one string, Mekhalā of eight, Raśanā of sixteen and the Kalāpa of twenty-five strings, for goddesses and queens - thirty-two, sixty-four or one hundred and eight strings

➢ Ankles - Nūpura, Kiṅkiṇī, the string of bells (ghaṇṭikājāla) and the ringing Kaṭaka, Pāda-patra, toe rings

FIGURE 4: *Photos of temple dancers. Source-123rf.com by Satish Pende*

While these are the general indications for ornaments to be worn, characters depicting Goddesses and specific regional women had their own specific garb. For instance, Naga women had to wear a hood while sages and their daughters should sport less decoration. In fact, women from different countries such as Avanti, Gauda, North- East and South, had specific dresses and ornaments as per their regional influences.

We still see these regional nuances introduced in present day performances. The head dress and costumes worn by artists in Oriya are very different from those worn in Tamilnadu. Distinct apparel and ornamentation is observed in performers of the Bhagavata Mela or Kathakali artists. The treatise implores the ornaments should be made with mica and coloured with plant dyes and mounted on thin sheets of copper.

The reason being, heavy ornamentation tired actors and they were unable to perform their act. Bharatmuni made an interesting comment in the verse 214-215:

This is the rule of action regarding the future mortals, [that should be adopted in dramatic production]. Why? Because want of sufficient strength will occur in men [of the future generation].

His rationale being that mortals of poor strength should not make any undue physical exertion, and hence crowns and ornaments with real gold and jewels would be very difficult to handle. He also mentioned this would be the case for those depicting battle scenes thus showing a deep understanding of the physical and emotional elements in performing arts.

The use of colours

Bharatmuni displayed an advanced knowledge on the coming together of colours.

In fact, it revealed a mature colour palette which informs us of the depth of knowledge on yet another aspect of art. He has talked in depth about four original colours black, blue, yellow and red which should be used for painting limbs. He then enumerated the derivative colours and minor colours.

Bluish white (*kāraṇḍava*) colour= white + blue	Yellowish white colour *u*)=white+yellow.
lotus (*padma*) colour = white+ red	green (*harit*) colour = yellow+ blue
pale-red (*gaura*) colour = red+yellow	dark red (*kāṣāya*) colour = blue + red

These rules of colours prepared by mixing them indicate different character personifications and this painting of the body is a matter of convention (nāṭyadharma) as belonging to dramatis personae. In present day dance ballets, performers use painting their bodies as a sign of characterization and hence the relevance exists as of today as well.

The treatise goes beyond the conscious engagement with physical characteristics to delve into a deeper subtext of emotional outpouring. Women whose lovers have gone abroad and are miserable dress shabbily or wear less ornaments. This is to reflect their

inner turmoil. Happy mortals wear the reddish Gaura colour while those who have evil thoughts in them wear brown. In verses 83,84 & 85, he mentions the deeper connection a character should develop.

After covering the body and its colour by means of paints and cosmetics an actor should assume the nature of the person whose character he is to represent. Just as the soul [of a man] after renouncing the nature proper to one body assumes another character related to the body of another animal, so a person having [a different] colour and makeup, adopts the behaviour connected with the clothes he wears.

Clothes are broadly divided into three kinds- white, red and variegated. White is predominantly worn when going to temples, marriages and of good social standing such as well read men, ministers, bankers etc. Ascetics and those who have renounced the material world, monks would wear tattered clothes or dark red cloth though Kings on the other hand enjoy the freedom to wear any colour of their choice. Observe a sense of interconnection with societal standing and the appearance of a person. In the present day, it is a well observed fact that well-dressed men or women are known to make a better impact in boardrooms while projecting a supposed social image with their dress. A character in a play reflects how they lived in society. Hence, ornaments play a very important role in completing the look of a character. A king or noble character, for example, will wear more elaborate gold or precious jewels and an ascetic will sport a necklace of prayer beads. All of these are in use even today.

Other ornamentations

The performing theatre is a transitional space that uses various tools to organize movement, patterns and the expressive elements that form the canons of classical performing arts. Weapons were used as additional decorations to enhance performances. Weapons such as the Bhindi, bow, sula, arrows, mace, discs, rod (danda) and shield (carma) are some used in performances. Bharatmuni gives detailed measurements for these instruments as well.
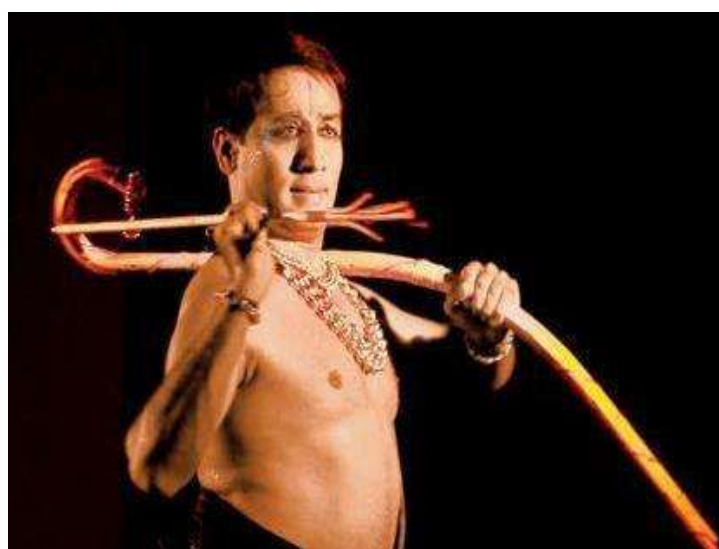
FIGURE 5*: Use of weapons on stage. Source: sathyanarayana Raju*

Further, jarjara, dandakastha (wooden staff with three bends), masks, umbrellas, banner staffs and water jars(bhṛṅgāra) are also accessories mentioned.

FIGURE 6: *Use of accessories on stage. Source: Sathyanarayana Raju*

Making of masks

Masks made of bilva paste or cloth were recommended. Once dried, these masks had holes made for the openings. Very specific measurements are given concerning masks and the openings to be placed in the masks. However, bharatnatyam relies on nritta and abhinaya which involve emoting and using hand gestures to express emotions and masks are uncommon as they tend to cover the face and obfuscate expressions.

Positing relevance

An understanding of the Natyashastra offers insight into not only the clothes and textures available and widely used at the time of compiling the treatise, it also offers a communication tool that has been founded on human psychology prevalent within India's cultural ethos. The essence of emotion is achieved by both the spectator and the performer. This aesthetic influence comes from India's cultural heritage and not just for classical arts but even in popular culture like Indian cinema. Story telling is an important attribute and the aesthetics established many years ago can identify and enhance storytelling techniques. Thus the Rasa theory can be used to appreciate cinema aesthetics as well. Direct evidence of the influence in cinema can be explained as cinema grew from theatre. Thus plot construction, performances, additional decorations help on screen narrations.(Piyush) Its influence does not just end with cinema, but permeates classical performances also.

Conclusion

While Natyashastra has been acknowledged for its Sanskrit scholarship, its deep insight into human psyche and elucidation of human emotions to multiple levels speaks of the importance of connecting with an audience be it a play or performative piece.

Bharat Muni talks of the Vibhava (cause) or the stimulating determinant and Anubhava (impact) or consequences. However, these are physical manifestations. The inner manifestation is complex and multilayered such as the emotion or the prevailing permanent psychological state i.e. *Sthayi Bhava* and the transitory emotions - *Vyabhichari Bhava* or *Sanchari Bhava*. These transitory states help the permanent

psychological states to evolve into *Rasa* or the aesthetic delight in the spectator. And this aesthetic essence is spotlighted by auxiliary incorporations of multitudinal tools as adjuncts.

One wonders why this extensive treatise was written. The answer lies in the purpose of literal traditions. Literal traditions are temporal maps which aid in negotiating connections across centuries through the writer and the reader and also present a historical perspective for shaping the present. A treatise with regards to movement, music, voice, stage decor and costumes is not only requisite but essential to artistic performance. While the Natyashastra is grammatical and didactic, it is also concerned with the psychology of the performance and hence the understanding the theory underlying the treatise is fundamental to understanding indian performing arts and culture.(Kudva) The fact that drama, since its origin, has aided as an instructing agent by practically conveying ideas, thoughts and narratives, a reading of Natyasastra assumes a contemporary significance and does not limit itself to the 'why and how' of a dramatic performance, evolving effectively a treatise on the art and scope of public communication. (Rudra) Hence, it is of no surprise that the Natyashastra and its focus on specific aspects of performing arts is a great resource to present day performing artists. The focus of this article has been on how the thought behind costumes and decorations are still remarkably relevant and used across performing arts, theatre and cinema. Surprisingly, it has managed to cross generational barriers to stay relevant to the present generation of artists and to create a wave of interest and adoption quite rare without loss in translation.

The treatise as it stands is unmistakably contemporary in scope and breadth of vision seen in the context of the interrelationship between performing arts and society.

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Study of Sustainable Packaging for Lifestyle & Interior Decor Product With Reference to Varanasi Handicrafts

Reena Pandey & Shraddha Jadhav

Abstract

Sustainability *focuses on fulfilling current demands without jeopardizing future generations' capacity to meet their own. In recent times Sustainable packaging is a dire need to save our environment. The demand for efficient and sustainable packaging is increasing day by day.* ***Packaging materials*** *constitute about 65% of the global solid waste. Approximately 380 million tons of plastics are produced every year across the globe as of 2018, and a total of about 6.3 billion tons of plastics have been produced over the last 68 years. Of the 6.3 billion tons of plastic, only an estimated 9% has been recycled, 12% has been incinerated, and the remaining is stranded as* ***pollution****, contaminating both land and oceans. This huge amount of plastic invariably impacts the environment (both land and ocean), affecting each and every life form. This implies the imminent need for sustainable packaging to save the environment. Sustainable packaging, as a term, is a culture or way of development and use of packaging materials. In the consumer era where consumers rule the world of business. This study describes a holistic approach towards consumer perception & their purchase preference citing how the products are packaged.*

Keywords: Sustainability, Packaging, Textile, Consumer preference, lifestyle, InteriorDesign.

Introduction

Varanasi has always been recognized as the main hub for some of the greatest handicrafts, which is why many consumers purchase those most frequently. Handicrafts carry cultural and ethical values ahead as these art forms are used from generation to generation. Because of the fragile nature of handicraft's vendors must be extra precautions about the packaging of handicraft items. The vendor takes great care in wrapping these handicrafts to maintain their beauty before shipping/ exporting or handing them over to the client.

Packaging includes thermocol, plastic bubble wrap, and plastic airbags which are the most widely utilized packaging materials, particularly in the case of handicrafts and by using these materials; we are generating a lot of plastic pollution in the process, which in turn creates pollution for the environment. To address this issue, we are investigating sustainable packaging alternatives, particularly for lifestyle accessories and interior décor products with reference to Varanasi Handicrafts.

Sustainable packaging is a novel concept that has received a lot of attention in recent years. Indeed, it is a critical issue that must be addressed in order to achieve the Sustainable Development Goals, which have both social and economic consequences. "Sustainability focuses on fulfilling current demands without jeopardizing future generations' capacity to meet their own" (https://www.investopedia.com/MITCHELL GRANT). In recent times Sustainable packaging is the dire need to save our environment. The demand for efficient and sustainable packaging is increasing day by day. Packaging materials constitute about 65% of the global solid waste. Approximately 380 million tons of plastics are produced every year across the globe as

of 2018. Eco-friendly Textile Jute is being explored as packaging material for Lifestyle and interior products.

Figure 1 Composition of Indian waste
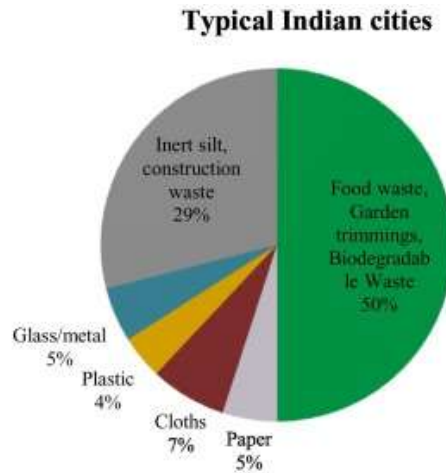
Note: In Recent trends in solid waste management status, challenges, and potential for the future Indian cities – A review by Akhilesh Kumar and Avlokita Agrawal , December 2020, Journal Current Research in Environmental Sustainability

In recent years, there has been a surge of interest in global environmental preservation. In this regard, green packaging is critical in order to decrease the impact of waste and pollution while also promoting sustainable development. In recent years, there has been a surge of interest in global environmental preservation. In this regard, green packaging is critical in order to decrease the impact of waste and pollution, as well as to support long-term growth.

Figure 2- Sustainable packaging cycle

Sustainable practices involve several processes that can be adopted by humankind. Only motto for adoption of sustainable practices should be to save mother earth.

Practices like Reduce means use in limitation, replace means replacement of all synthetic material with natural material. Reuse means adoption of upcycling of used material; recycle means to use again and all. Companies have traditionally reused and recycled packaging where it is economically feasible. Using as little packing as possible has also been a frequent objective to assist cut expenses. These efforts have been intensified in recent years as a result of social movements, consumer demand, and legislation. Packaging, distribution, and logistics are all covered.

Purpose of the study

The aim of this research is to understand customer behaviour and loyalty to sustainably packaged products and to promote sustainability.

Objectives of the study

1. To explore consumer perception & their purchase preference with reference to lifestyle and interior product's packaging.

2. To promote knowledge of sustainable packaging using eco-friendly textile and its role in improving sustainability practices.

3. To evaluate eco-friendly textile packaging for lifestyle and interior products.

Literature review

● **Social aspect of sustainable packaging by Norbisimi Nordin,Susan Selke**

This research paper explores consumers' perceptions on the sustainable packaging concept, their perceptions of the impact to the environment and purchase decisions. Discussion and information gathered in this paper is aimed to stimulate understanding on the importance of the social dimension of packaging sustainability and its role in supporting the efforts to improve sustainability practice.

● **Preserving songket through sustainable packaging design by Nor Ziratul Aqma Norzaman**

The paper research songket material which is brocade fabric from Malay culture. The research found that packaging material is functional, sustainable material and recyclable, anti-corrosive, abundantly available and importantly, it provides a vacuum-airtight environment and is resistant to high humidity; highly suitable for sampin storage. With the new packaging design, it is anticipated that the Songket cottage industry will continue to thrive prosperously and remain highly competitive and versatile in the global market.

● **Sustainable Food Systems from Agriculture to Industry- Improving Production and Processing by C M Galankis**

This paper explores the consequences, use of eco-friendly material to reduce the environmental impacts associated with the production, use, and end-life of packaging materials used in the food sector.

Methodology

The **methodology** study is involved using sustainable textile for packaging of lifestyle and Interior décor products and reflection from the end-users. The study's main indicators are environmental sustainability, product care, and consumer acceptability.

Iteration and prototyping follow end-user input as part of the approach. Sustainable packaging is important because it minimizes the ecological footprint before the product is shipped to the end-user. Through this Paper **designers and customers** can help in improving the sustainability practices by using eco-friendly textile as packaging material. Humankind's effect on the natural environment is one of the most pressing issues we face today and in the next decades.

This study describes a holistic approach towards **consumer perception & their purchase preference** citing how the products are packaged. This research paper's study is intended to promote knowledge of the relevance of sustainable packaging and its role in assisting efforts to improve sustainability practices. Implementing eco packaging in packaging is no longer an option, it's a necessity. The phrase "sustainable packaging," refers to packaging that generates less waste and will ultimately disintegrate. The creation and use of packaging that improves sustainability is referred to as sustainable packaging.

During the research methodology adopted was in two steps:

1.   Consumer study

2.   Alternative packaging material for sustainable

Sustainable packaging

Packaging done by sustainable material is known as sustainable or eco-friendly packaging. For the study Jute is identified as the material to be used for packaging of handicraft products which need special care during handling. Along with jute materials like used paper, hexel wrap , waste fabrics , waste papers.

Figure 3 - Sustainable packaging

Note- (https://www.packagingstrategies.com)

What makes a packaging material sustainable?

Most of the sustainability in packaging materials begins with material procurement. Few features can help you evaluate if the materials you are packaging with are sustainable or not, including:

212

1. If the chemical characteristics of the substance are inert, this decides if the enclosed product is safe to ingest and does not release poisons into the environment.

2. If clean manufacturing processes are utilised to create the material from its raw equivalents.

3. If the material's performance has not degraded from the original non-eco material's performance requirements.

The concept for new packaging

Traditional packaging is done mainly for the product safety not for aesthetics or for reuse so when any product is bought or ordered online, majority vendors check the safety of the product while shipment. When it reaches the customer the end user just unwraps and throws the packaging material. Now the study explores the idea of functional use of the packaging material even after use of wrapping of the products and to promote sustainability.

The Sustainable Alternative For packaging

There are many alternatives for packaging which can be experimented like

1. Hexcel wrap is **easy to stretch and easy to tear**. Once stretched around the product you simply tear the paper, and the paper interlocks on itself. No need for adhesive tape! Not only does this reduce plastic use but also reduces pack times by up to 50%. The use of hexel wrap instead of plastics for the packaging of floor carpets which are majorly used as a decor part of Interior design, bubble wrap, etc will save much more energy without disturbing the function of packaging. Hexel easily wraps around a product, and the layers that form provide excellent protection. It also decreases packing time by half and increases packaging job productivity. Because of its small size, it takes up about 80% less room than bubble wrap. Its specially designed interlocking feature also saves cello tape for pasting or locking the packaging.
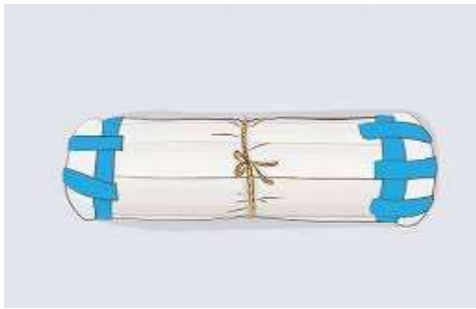
Fig. 4. Existing method of carpet packaging   Fig 5. Proposed sustainable method of carpet packaging- Hexcel wrap

2) Waste from the tailor's shop or fabric waste can be used as the fillers in the packaging for handicraft products which would work as shock absorbers.

3) Paper waste (dry) can be used as fillers for the packaging in place of bubble wrap.

4) Jute fabric is eco-friendly fabric and one of the strongest so can be easily used as Packaging material.

Fig. 6. Jute Material

5) After wrapping with tying of the product should be done with fabric or yarns of more thickness.

Fig. 7. Tying Yarn

6) Baboo stripes can woven and used as the packaging material for handicraft products specially lifestyle and interior decor

Fig. 8. Bamboo strips packaging
(https://www.facebook.com/beyondbordersphilippines/)

Challenges of sustainable packaging

1. **Meeting Consumer Expectations & Current Standards:** Customers may be fickle, and companies naturally do not want to offer them any incentive to switch

214

to a competitor's goods instead. While consumer demand is changing toward sustainability, they still want a similar experience to what they have had in the past – and this poses a significant problem.

2. **Optimizing Material Performance to Protect Goods:** When used for packaging, sustainable materials must outperform non-sustainable alternatives. This extends beyond satisfying customer expectations to the problem of food waste and/or product damage. Packaging's duty is to safeguard the commodities contained within it, and there can be no compromises here.

3. **The Costs of Sustainable Packaging:** Now, the cost of utilizing sustainable packaging is understandably greater than the cost of using conventional packaging. This is related to the resources used and how they are sourced (both virgin and used materials), but it is also owing to less-established supply networks, production methods, and poorer economies of scale.

4. **The Product (and Packaging) Lifecycle is Crucially Important:** We also need the proper infrastructure in place for the packaging and the product to manage the whole lifecycle till the end of its life. And it is here that the next difficulty emerges.

Findings

Research shows that consumers have opinions about sustainable packaging and our survey had major there findings regarding Sustainable Packaging for lifestyle & Interior décor products with reference to Varanasi Handicrafts

- During the survey, it was found that approximately 60 to 70 percent of consumers are ready to pay more for sustainable packaging.

- Around sixty-one percent of consumers accepted that they would invest more in sustainably packaged products if it would not be more than traditional packaging.

- Approximately forty-five percent of end-users said they would be frequent buyers for sustainably packaged products if it is visible more in the market with properly labelled packaging.

Conclusion

The packages which are recommended to keep introduce and present the handicrafts products, using the sustainable parameters by eco-friendly textile would be in an effective way in the packaging process. The handicrafts industry due to the importance in introducing the culture, tradition and the art of a society needs attention in the method of presentation to the customers. Natural packaging consistent with function and sustainability could be a method in harmony with content, efficient, economic, construction and customer centric interaction methods.

The objective could be gained in the way to reduce the amount of waste and ability to reuse and change the application.

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Sustainable Packaging for Varanasi Handicrafts

Mukta Avachat-Shirke

Abstract:

Varanasi is one of the oldest cities in the world. New excavations have also thrown light on this. Its cultural heritage and handicrafts have sustained onslaught of time and mercenaries. Handicrafts always have a traditional value along with its aesthetics. The skills to produce these handicrafts have a continuous flow from generation to generation. In this paper the researcher had tried to locate the psychology behind buying factors or purchase decisions of handicrafts and the ways in which these handicrafts can use sustainable packaging by tying it with ethos of the city that has sustained through ravages of time. This paper will discuss about the sustainable packaging of these handicrafts for Indian as well as international consumers. Hence analytical study and feasibility studies have been used for this paper. It will try to explore how sustainable approach of packaging which is used for contemporary products can also enhance the selling values of this traditional handicraft industry of Varanasi.

Keywords: handicrafts, indigenous arts, crafts, packaging,

INTRODUCTION

India has a reach history of toy making date back to 5000 years. Handicrafts refer to the products which are essentially made up of hand work of artisans. The handicraft industry which is decentralised has lot of potential to increase the economic growth of the country and foreign exchange. It is the second largest industry for the country's economic growth. Hence to sustain in the industrial world and to expand business, indigenous arts have to keep themselves updated with packaging, marketing and selling. Artisans are mostly dependent on middlemen for the growth of their business. According to United Nations Educational, scientific and cultural Organization/ Information Technology Community (UNESCO/ITC) International Symposium on "crafts and the International Market: Trade and customs Codification", Manila, Philippines, October 1997:

Handicrafts can be defined as products which are produced either completely by hand or with the help of tools. Mechanical tools may be used as long as the direct manual contribution of the artisan remains the most substantial component of the finished product. Handicrafts are made from raw materials and can be produced in unlimited numbers. Such products can be utilitarian, aesthetic, artistic, creative, culturally attached, decorative, functional, traditional, religiously and socially symbolic and significant (M.Ghouse, July 2012).

It provides maximum employment after agriculture sector (Kumar & Rajeev, 2013). But unfortunately it has not received much attention to upgrade its market value.

According to Irish Tourist Board's study on tourism sector which is applicable for Indian tourism also -, "The purchase of crafts is regarded as an integral part of the holiday and over and above the basic needs- accommodation and transportation- crafts are regarded as a bonus for tourists" (Terry, 1999).

Handicraft industry is the major source of economic growth of the country. It has lot of potential to expand and spread worldwide as well. Handicrafts have aesthetic value with cultural significance. Handicrafts in India have survived throughout the time because they are attached with festivals and rituals. They have been passed down from generation to generation. Handicrafts are usually produced with low initial capital investment from mostly available material from the producing country with the designs reflecting local cultural factors and skills (M.Ghouse, July 2012). Varanasi can be called as one of the main centre for handicrafts where one can see a variety of it. There are different types of handicrafts available in Varanasi. Meenakari , Basket weaving, Varanasi wooden toys, Carpets, Sarees, Terracotta are some of the largely found handicrafts. Though it is mainly famous for '*Banarasi Sarees'* in the world, wooden toys are also famous.

Wooden Toys making process-

Handicrafts have traditional value. To survive in this industrial world and Chinese dominating world, handicraft industry of wooden toys has to update itself regarding packaging, marketing and branding. There are many centres in Varanasi where toys are made by local craftsmen. These toys are available in different sizes and prices from 1 inch to 2 feet tall. It is created from wood log. Then it is cleaned and sanded. Wood is first chipped off and carved. The toy is mostly created in a single piece of wood. Two coats of white duco paint are applied on these toys first. Lacquer is applied on toys after painted it in bright non toxic colours. These are painted in batches with same colour. (Visen, Wooden Toys of Varanasi).

Fig. 1 Panchmukhi Hanumaan (Magnacraft India)

According to local traders there are about 4500 craftsperson in Varanasi. The geographical Indication (GI) tag has been received by this industry in 2014-15 under the GI Act, 1999 Government of India. Pandemic affected their income but central government's support is a new hope for these artisans (Dubey, 2021). But to improve the income of the artisans, there is a need to change the packaging of the wooden toys.

The objectives of this research are-
- To study how to upgrade packaging of Varanasi handicrafts
- To study how to introduce sustainable packaging for wooden toys
- To understand Customers' purchase decision of handicraft products

The focus is only on wooden toys packaging of Varanasi. Descriptive and analytical methods have been used for this research.

Study shows that Mirzapur and Varanasi are famous for such type of toys. Artisans create mythological, decorative figures, animals, sindoor dibba, vehicle toys etc. Different types of wood have been used to create these toys like Safeda or Eucayptus, Kirbil, Bhurkul or Gular, Shisam and Kaima (Visen, Wooden Toys of Varanasi). But widely used woods are eucalyptus and Gular because of their availability.

These are the images of current packaging of these toys. One can observe that it needs to improve or change entirely.
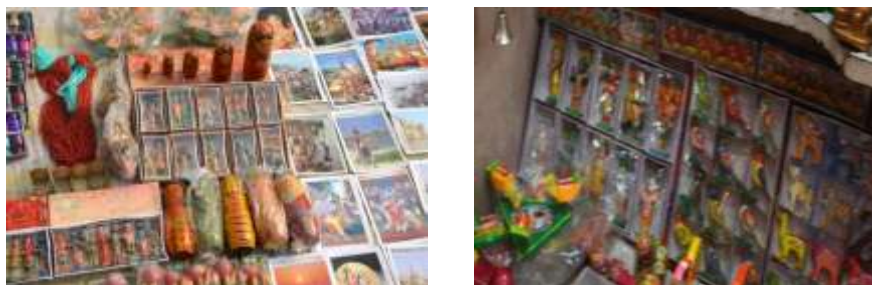
Fig. 2 and 3 Current packaging of wooden toys

These are some observations-
- Current packaging needs to improve or change entirely.
- There is no aesthetical value in current packaging.
- It is not stiff to keep wooden toys safe.
- No information about crafts on current packaging
- Current packaging has no '*gift'* value

The consumers are exposed to objects on shelf, wrapped in packaging. The decision of buying handicraft is dependent on this moment; how it makes them feel and if the product can potentially satisfy their need can decide the consumer's behavior (Mittal, 2014). One can see that the current packaging is not at all fulfilling this condition.

These are some of the images of process of toy making.

Fig. 4 Artisan working (Visen, Wooden Toys of Varanasi)

Fig. 5 Suggestive packaging image A

Fig. 6 Suggestive packaging images of actual eucalyptus sawdust pulp B

Some survey revealed that Indian handicraft exporters of various handicrafts have low international market share because of low international market awareness, poor information in upcoming market trends, weak infrastructure and use of obsolete technology (M.Ghouse, July 2012) . The lacuna can be clearly seen in contemporary trends in packaging of Indian handicrafts.

In the process of carving and chipping off extra wood, researcher observed lots of sawdust and extra wood cut pieces. According to researcher this sawdust can be useful with sustainable approach. Thick boxes of eucalyptus sawdust can be made. Previous research has proved that a good quality printable paper can be made with eucalyptus wood pulp. It can be of various thicknesses. Eucalyptus bubble wrap/leaves or even wastage of banarasi saree cloth can be used for inner packaging and thick boxes made up of eucalyptus sawdust pulp can be used for outer packaging. To survive and to make profits handicraft industry has to find ways with the available resources smartly. Eucalyptus belongs to the hardwood and is an excellent short-fiber hardwood pulp. This pulp can give higher economic benefits. Variety of thickness of papers can be achieved with eucalyptus and papers like toilet paper, napkin, writing paper, copy paper, white paper board can be created (Eucalyptus pulp Making). Training centres can be formed in collaboration with government of India under 'Vocal for Local' scheme for the training of creating eucalyptus papers and boxes. Prime Minister of

India Modiji also appealed in his 'Mann ki Baat' to "team up for toys" ('Acche Din' for Varanasi's wooden toy industry post mention in PM Modi's 'Mann Ki Baat', 2021).

Fig. 6 Suggestive packaging images of actual eucalyptus sawdust pulp C (News Desk, 2017)

Study shows that buyers directly equate price with quality. Whenever consumers are planning to buy any craft as a gift or for antique value; the expectation is higher according to higher price range. Consumers are willing to engage with the product if one makes the packaging exciting with digital tools (Mittal, 2014). According to Mittal, Packaging is the gateway to product perceptions. Then consumers are ready to pay the price also. Research and development regarding packaging by artisans can help them to understand consumer psychology and a need for updated packing of wooden toys.

Study suggests that consumers buy handicrafts for status symbol, uniqueness, quality, creativity, customization, artisan/local community support for souvenir quality. Foreign buyers whose cultural background is different, they will buy Indian handicraft mostly for its souvenir quality.

Recently one can see that there is a trend of giving handicraft as corporate gifts in India.

Conclusion

- Thick paper boxes and papers can be created from the same eucalyptus sawdust that is a waste product of wooden toys.

- This will create the opportunity for the wood based paper industry in Varanasi.

- As Indian handicraft industry is highly labour intensive, people from Varanasi and other members of the artisans' family can get work.

- The problem of rising cost of raw material can be solved as it is easily available at the toy centres in the form of sawdust.

- Layer packaging can be done with attractive Indian Varanasi craft motifs/graphic and information regarding crafts.

- Sustainable approach, printed information and motifs will enhance the selling value of the products.

Sustainable approach, printed information of cultural and historical significance will enhance the selling value. Continued success of handicrafts is dependent on the production of new products and designer value of packaging. Eucalyptus paper packaging can meet all criteria required for shipment export like transit, climate conditions etc. Consumers are ready to pay high price for handicrafts if the consumer sees worth of the product they are paying for with packaging. In short, if there is selling value in Varanasi handicraft packaging and if consumer psychology works in the following manner-
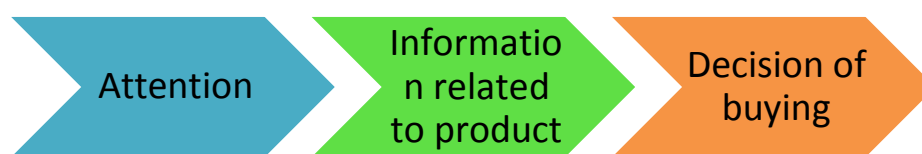
Fig. 7 Psychology behind consumer's buying decision

Then, these handicrafts can reach world market more easily and effectively due to a better packaging choice.

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The Artistic Wood Art and Craft of Srikalahasti: A Study

Muppidi Rambabu & Y.Anjaneyulu

Abstract

India has a great cultural tradition because India consists of so many fine arts forms; one of the most attractive wood art. Srikalahasti is a village in the state of Andhra Pradesh, India. The wood carving sculptures in this village maintain a unique place of style and aesthetics that have always had a beautiful texture and heritage of Indian handicraft culture. These handicraft arts are very ancient, cultural crafts and of high quality, and the materials used are seemachintha (in Telugu) wood sculptures in lightweight colors.

My paper focuses on making process of these art forms, the lifestyle of artisans and woodcarving innovative ideas, knowledge sharing, artisans' present situation, Marketing products, Analyzing, and the carving of the process, the relevance of the wooden toys and wood products in the propagation of the handicrafts.

Keywords: Handicraft, Beauty, Social Capital, Market, Manpower.

Introduction

Srikalahasti is famous for its writers, artists, and sculptors, as well as for its fine arts. It is the birthplace of many fine arts artists, Sculptors, This region is also famous for wooden sculptors on birthplaces, pottery makers, handicrafts with leaves, Painting on decorative textiles, jewelry designers, that are fully mastered the ancient craft wooden craft and kalamkari. History: The family of Panabakam Ganesh Achari in Srikalahasti has been demonstrating his skill in carving based on this work since his childhood. His cast profession is Vishwabrahmin, people with other cast such as Muslims, SC, BC are also well trained in this profession. Ganesh Acharya is involved in this work since his childhood, dedicating his life as a carpenter. Ranga Chari is a teacher of Ganesh Achari, who is 12 km away from Srikalahasti, in Pallamalli village. They also make Doors, Plough, bullock carts, Window Doors and wheels, and Home Appliances with wood since their childhood. Ganesh Achari come up with new ideas, and he started doing this work with the intention of making good returns. Due to his good carving quality of products, he got many orders from neighboring states and expanded his business. There are about 15 families in Srikalahasti, but Ganesh Achari is remarkable at making sculptures.

Objectives

- To know the lifestyle of people who make wood carvings.
- To Study the preparation methods and know the statistics of raw materials
- To analyze the flexibility of marketing and Developing products
- To the Preserving, this dream for the future without being too extinct is to study and inform about them

Material

Seema chinta wood (Telugu name) botanical name Pithecellobium dulce (or) Mango wood (or) Teak wood, Wood powder, Emery paper, Hexa blade, fevicol. And Chemicals like Polish, Sheenlac, and sealer. Hand Tools like wooden Hammers, tape measurer, Crowbar, Cutting Pliers, marking tools, utility knife, screwdrivers, and circular saw. Colors like Warmish, Brown, Gold, Silver, Enamel Paints.

The process of making- Flow chart
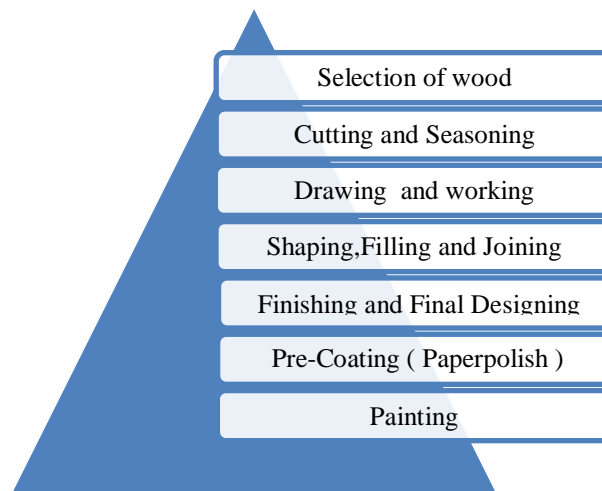
Table -1:*flowchart Making Process.*[6]

Sl. No	Coming up while working Wastage Process	Percentage
1	Cutting of wood	10.0
2	With equipment Shape outline removing background	20.0
3	Tool Hitching design patterns	10.0
4	Sand Paper with Polishing	0.5
5	Detailing futures and shape of product designing	0.5
6	The amount in the form of percentage wood Product	50.0
	Total	100

Table -2:*Wood percentage.*[7]

Ganesh Achari's role in the wooden sculptures is amazing:

Ganesh Achari has been working for the last forty-five years, carving thousands of wood sculptures. Many sculptures of God were engraved on wood and sent to foreign countries and states. Along with this work, he stood as an ideal for the future. And dedicated his life to carving wood sculptures some of the sculptures carved are Dashavataram, Venkateswara Swami Namas, Cone, Chakras, Krishna and Gopika's,

Ashta Lakshmi, Ashta Vinayaka, Mahabharata Ratham, Arjuna, Padmavyuham, Vishwaroopam, Ramayana, Mahabharata Ashta Vinayaka, etc. He is very good at carving statues.

Figure 1: *Senior Artisans Ganesh Achari who shows the sculptures.*[8]

Wooden Sculptures Details:

Sl. No	Name of the Wooden Sculptures	Material	Product Dimensions Sizes (LxW x H)
1	Balaji standing statue	wooden	11.5 X 2.5 X 15.5 CM
2	Vinayaka, Sri krishna statue	wooden	5 x 12 x 6 cm
3	Lakshmi, Saraswathi Devi statue	wooden	L7.5x W2.75x H12
4	Wooden ganesha , Panels	wooden	26 x 38 x 3 inches
5	Dasaavatar,Vishnu,Ashtalaxmi Panels	wooden	24 x98 x2.7 inches

Table – 3: *Wooden Sculptures Details.*[9]

Due to covid-19, all the handicrafts are becoming extinct day by day because none of such intermediaries is still in the form of toys that have arrived in 18 months, so my condition is very miserable no orders. The sculptural art forms that made our situation so miserable remain intact and this work left much to be desired. Also, support us with this woodcraft as it is available in our area by arranging for us raw material either through bank loans or through subsidy. Nearby Tirumala Tirupathi Temple Once upon a time there were more orders for us to make a wooden statue. Once upon a time, there were workers who worked with us to place orders and sculptors who worked for these reasons for hours and days and months and carved their art and craftwork and continued to make a living so that in the present circumstances it would be difficult to take even a single step in any of these situations immediately. The artists who work with us are also declining day by day and fleeing too far, I want to show my interest in

this dream for the future, support us and provide us with new designs by experts in our area. Where to train and educate us on new designs and training through training camps and new material and machines to show that we are the CAD, and CAM for the future if we adapt and prepare ourselves as Innovation Artists. Also, train us on the mechanics to speed up work on our work and make our work our design appropriate changes and let the world know our work. Our hope to introduce new works of art to the world instead of the existing ones.

After we make the statues they are a place of no harm to the environment they will be like that for a lifetime so there will be no trouble if you learn this dreamLives are so happy and attractive. This task will be very difficult for the future but the present youth are not showing much interest so if the mechanism to attract them teaches us new techniques then how much they can be very useful for the next generation.

Figure 2:*A study by Srikalahasti Artisans is skilled in carving sculptures.*[10]

Review of Literature

G. Almevik (2013):

Conservation theory for enhanced craft practice**:** An indicator of the fine arts tradition associated with a heritage that is inherited and culturally researched on handicrafts. Demonstrates the performance of handicrafts technically and some materials made with set properties in the form of set-designing for film and design waves as in film, Also the handicrafts products for film, Television, Drama, Theatre shows to other shows have very close connectivity to the shows they show thus through this book every object that is handcrafted is very close.[1]

Zhenbai wrote (2017):

Handicraft is very beautiful, it has a specialty of creating wood, it is very delicate and soft. Thousands of years ago people continued to make many exterior constructions, houses, utility products, children's toys, kitchen utility products, interior items, and exterior items made of wood. They also create as per the needs of the media who market the manufactured products in the domestic market as well as in the global markets.[2]

Aayushi Verma wrote (2014):

Trends evolution in a wooden folding screen of Saharanpur: Art and Design of craft wood products and their raw materials as part of global modernization. As part of the development of products, the vast knowledge on them, the wisdom of the fellow human beings to add to the needs of those who make the design, researching on the goods that are always needed for them, new material in the market, new designs, innovative ideas, modern new designs, products, traditions, children toys, sculptures, goods industries are developing industries. Saharanpur timber and traffic process has changed a lot since the independence of India. As part of their lifestyle, the people of the area have been producing traditional designs of their artwork, choosing wood production products with a goal of time and presenting their artwork in a dream form while also practising old techniques.[3]

Fayaja(2014):

Art and Technology: the interrelationship between technology and conceptual art: Relationship art and Craft has a unique understanding of what technology should look like in the 20th century. Dreaming is closely related to the classical craft, with each of the most sophisticated of which is designed by providing technology based on computerization. When artists combine art with technology to produce a mature product.[4]

Govind Prasad (2014):

Sense-Making through the Trash Art: Connecting the Arts of Everyday Life Discarded Objects**:** Why are such eco-friendly items so unique? The tools you make today are useful for creating unique artworks and getting a lot of compliments from many people and looking at their objects very closely today. In addition, the recycled material can be used to make the desired product; even art, craft, and design will find it much easier for them to connect dreams closely by showing the social-ecological art, cultural literature in terms of civilization, etc. There will be a chance again to receive many successful peaks in the field.[5]

Methodology

The present study has relied on primary and secondary data. The primary data were collected from the field through focus group discussion and the secondary data was collected from various evaluation studies conducted by Lepakshi handicraft emporium of Andhra Pradesh, regional publications, journals, magazines, and reports related to the topic, and e-journals.

Recommendations

As part of the study, each of them will look at the video market situation of their products and their raw material, set up training centers locally, make new designs to suit the market, and train them on what you have done.

Result Analysis:

1. Do you know how much waste the toy gets after the sculpture product designed has made the entire design pattern?
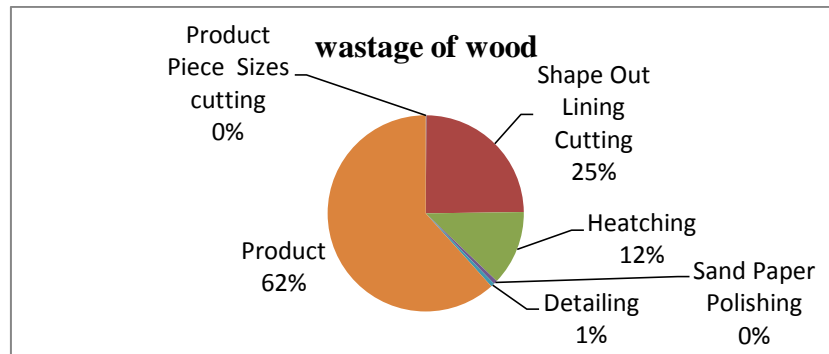
Chart 1:*Wooden Sculptures Details.[11]*

Findings and Solution

Handicraft Development Corporation NID, NIFT, IIT, all Fine Arts Universities, fine arts Colleges, of which they are design companies, should explore the area and select students studying in the area to work on their development. Such teachers who teach that education in these universities is there for Fine arts artists to enhance their products. Through them, the government is in direct need of digitization products i.e. CAD (Computer-Aided Design), CAM (Computer-Aided Manufacturing),2D (2D.Wood Dimension Panel work),3D (3D.Wood Dimension sculpture module work) Product Modelling in terms of documentary in Project form.

Conclusion

The region is the birthplace of many arts; the popularity of wood carvings in Srikalahasti is declining. The artists who make these dolls are also getting a fair go so any of the sculptors need to be newly identified and make the artist cards they want. There is a great responsibility to promote the products here. There are many families of artists in Srikalahasti who have a history of giving and receiving support and encouragement and giving them many gifts. To nurture the creativity in them, need to create the right market for the products and inform the world. It is everyone's responsibility to bring to life the art that exists here so that it does not go extinct, at present in the market; however, the modern dolls are very impressive. It is the responsibility of all of us to preserve this traditional art and craft as the impact of wood toys,wood sculptures, which is a traditional art through modern toys, appears to be diminishing.

The wooden dolls of our region Our local toys are close to the tradition of informing their uniqueness Indigenous Responsibility Culturali.e.Kondapalli dolls, Etikoppaka dolls, Nirmal toys Asharikandi Terracotta, Channaptna, Thanjavur, Natungram, Wooden toys of Varanasi,Dolls of Vilachery All such forms of Painting pictures tribal art and craft are disappearing and the local dream is in a state of extinction so we have to pass on this art to the future. The government is such a hint that they are informing the artists who are here to promote artists, focusing on local toys that are local, so we need to show our art to artists. It is the responsibility of the government to inform the future generation of fine arts, artists and their families and to give them a priority. So as part of my research study, there is no obligation to take a look at the fine arts in the area and find out about their products and to ensure that the market does not endanger

their dream for the future. So there is no obligation to preserve the fine arts and pass them on to future generations. Encourage them to give due recognition to their products and promote locally made wood carvings fine arts let's preserve them.

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Tables:

6. Table -1: Flowchart Making Process.

7. Table -2 Wood percentage.

8. Table – 3: Wooden Sculptures Details.

Figures:

9. Senior Artisans Ganesh achari's who show the sculptures

10. A study by Srikalahasti Artisans is skilled in carving sculptures

11. Chart: Wooden Sculptures Details.

12. Appendices

Appendices

Srikalahasti Artisans who show the sculptures as they are written by the author.[12]

230

Roal of Architecture in Conserving and Promoting Handicrafts: A Case of Varanasi

Mahesh Bangad & Shreya Agarwal

"I do not want art for a few, any more than education for a few, or freedom for a few…What for do we have art if it cannot be shared?"- William Morris

Abstract

It is said that Varanasi is as old as time and that it is impossible to tell exactly when the city was formed. For over centuries, the land of the Kashi Vishwanath is not only a religious powerhouse but also a place that has conserved and preserved several arts and handicrafts. It is impossible to leave art from architecture and both symbiotically contribute to each other in terms of aesthetics, culture, and use. Architectural manifestations contribute to the use of art and artistic styles that get depicted not just in paintings, sculptures, or woodwork but also through the jharokha, the oriel windows, and the decorated facades of the timeless architecture of Varanasi.

The paper looks at the role architecture plays in conserving and promoting the expansion of the handicrafts of Varanasi, how efforts are being made to conserve the rich legacy of art & architecture in the temple town, and the state of heritage in Varanasi is also studied as a part of the research. In conclusion, the paper highlights an architectural intervention in the Kashi Vishwanath corridor that will serve as a model urban insert in such religious towns which have significant art, handicraft, and architectural heritage of their own.

Keywords: Architecture, Art, Handicrafts, Conserving, Framework

Introduction

Varanasi owes its existence to the river Ganga, considered to be the holiest river for Hindu people. This led to the development of the primordial city of Kashi on the west banks of the river. The primeval association of the river Ganga with the religious, traditional, and cultural fabric of the city and the enormous effect of the associated activities on the development of economic and social life of the town and related tangible and intangible cultural expressions is exclusive in the world (Singh).

Varanasi as a heritage city

"In Indian tradition, heritage is defined as 'dharohara', which is extracted from 'the mother earth' (dhara-), and 'endeavour of identity through time' (-ihara). That is how it is explained in terms of the 'root' ('shrota') and 'identity' ('asmita') – a framework of continuity of interconnectedness and a personality of culture. As a portrayal of the remembrances and grandeur of the past, the concept of heritage is a way of viewing the past and its relation with places. Thus, archaeological sites, monuments, antiquities, and sacredscapes are symbolically the places of learning and the repositories of knowledge about former understanding of our planet and our relationship with it." In a broad sense, such heritage refers to the places where the spirit of nature and tradition meet, and are additionally symbolized and maintained by people's attachment to the rituals (sacred and secular, both) performed there (Rana & Singh, 2016).

Varanasi as an example of the continuity of intangible living traditions of life

Since time immemorial the natural and cultural landscapes of the city, closely analogous with the traditional way of life, have retained an active social role in contemporary society. The presence of charitable homes and rest houses for pilgrims are some of the city's distinctive characteristics. Additionally, several arts, crafts, and painting forms bear witness to the continuity of historic-cultural tradition. Banaras is considered to be a veritable jungle of celebrations concerning variety, distinction, time, sacred sites, performers, overseers, and side-shows (Rana & Singh, 2016).

Varanasi as a centre for various handicrafts

Varanasi is a harmony of various cultures, religions, art, and literature in a single piece of land. It alloys life within itself and life comes at an unprecedented pace. Other than the innumerable temples; another great attraction within the city is its art. They say the arts and crafts of Varanasi are older than the town itself; a number of them have been an attraction for hundreds of years in the past. Each of the artworks has its unique tale of voyage and the exceptional crafts of Varanasi never fail to catch the eyes.

Varanasi has, since ancient times, been hailed as a premier centre for some of the outstanding handicrafts. The most renowned craft of the town is silk weaving; 'Banarasi Sarees' crafted by local artisans are largely preferred, not only in India but across the world.

The various handicrafts of Varanasi are:

Source: http://varanasivideos.com/2018/12/11/bamboo-craft/

Bamboo Baskets Weaving

Source:https://jnanapravaha.org/handicraft-atelier.php?pid=2&sid=35&txtsearch=&page=3

Banaras Metal Repousse

https://www.fibre2fashion.com/industry-article/8776/banarasi-sari-evolution-and-endurance-in-modern-age

Banarasi Saree

Source: https://varanasivideos.com/2018/12/11/gulabi-meenakari/

Source: https://www.knocksense.com/lucknow/27-gi-tags-in-up/lucknow-zardozi

Gulabi Meenakari   **Zardozi Badge Making**

Source: https://www.directcreate.com/craft/bhadohi-carpets

Bhadohi Carpets

Source: https://www.knocksense.com/lucknow/27-gi-tags-in-up/gorakhpur-terracotta

Clay and Terracotta Works

233

Source: https://www.knocksense.com/lucknow/27-gi-tags-in-up/chunar-balua-patthar

Chunar Sand Stones

Source: https://varanasivid)eos.com/2019/01/02/undercut-stone-carving-of-ramnagar/

Undercut Stone Carving

Source: https://www.knocksense.com/lucknow/27-gi-tags-in-up/varanasi-wooden-
lacquerware-toys

Wooden Lacquerware & Toys

Literature Review

The skills of entrepreneurs are not a blessing from birth but are developed through ideas over several generations and involve continuous practice. Growth depends on several aspects here; tourism provides the platform for the development of entrepreneurship and specifically MSME. This is because the entrepreneurs are involved in the business at all levels making a strong contribution to the economic growth of the country. The weavers of Varanasi are for the handloom industry of Banarasi fabrics and generally belong to small villages. These are the experts with rare and genuine expertise in the field without undergoing much official training guidance. They have been carrying this by learning and working at all levels from home to producing unique arts that people prefer to buy here. There is immense scope for the residents because of the availability of raw materials, favourable environment, and skills which the entrepreneurs already have. These entrepreneurs involved are usually associated with a small-scale industry or handicraft industries or MSME (Micro, Small and Medium Enterprises) (Rani, 2020).

In another paper, the author talks about the Cotton weavers of Sarnath, who are famous for producing cotton weaved products and silk weaved sarees. Sculptures references at Varanasi including terracotta carvings and their patterns could be found in the weaves of Varanasi. Early weavers used the same design palette as the architect used in their designs and it was a give and take policy. Today cotton weavers of Sarnath are earning a lot through their fine designs and materials. There should be some more training programs launched by the government to increase the efficiency of the entrepreneurs, especially in the case of the handicraft industry. Proper workshops could be organized by institutions across the globe for these small entrepreneurial groups so that they could participate and enhance their skills (Rani, 2020).

According to Nath "Architecture is the mother of the arts of sculpture, painting and the allied decorative arts, and is a continuous evolution." Culture is the bone of society; it plays an important part in every field as in political or social. Art is not apart from culture. According to Agarwal, the artisans trained the new generation of artisans by themselves and as a result, their successors also used the same old technology, leaving no room for the latest technology. A local handicrafts industry had proposed opening a modern stone handicrafts training institute in a joint venture with the government which provides a chance to the new entrants in this business to develop new handicraft-making skills, but there was no response from the government (Sharma, 2012).

The term handicraft is ambiguous. Besides the commercial value, these products also have a symbolic meaning, often more important than the utility or educational purpose. Handicrafts are the mark of a community, discrete works of art reflecting a group. Ethnic products are acquired from idiosyncratic characteristics of social groups: material, rational, intangible, and emotional characteristics. These elements of creative heritage developed by individuals reflect the societal artistic expression of the community, either in a verbal or a material form. Often traditional arts or handicrafts are not appropriately acknowledged (Abdou).

Of the many ways possible, following are a few interventions that are possible at the local level for preserving traditional crafts:

1. Training Centres for crafts and trades

2. Educational programs

3. Design training workshops

4. National bibliography: That records the arts and crafts of the country

5. Development of craft products

6. Creating a trustworthy network with markets/bazaars/souks.

7. Regular exhibitions

8. Display at Hotels, motels, and guest houses

9. Promotion of craft villages

Researching further, looking at the western world for similar integration, there is an Egyptian Case Study of "Al- Foustat Traditional Crafts' Centre", which reinforces the role of Architecture in promoting the local arts and crafts. Foustat crafts' centre is affiliated with the Cultural Development Fund, it is considered among the most prominent projects of the Ministry of Culture, aiming to revive the glories of great history, and assert a radiant present. The centre provides the artists and craftsmen with a complete opportunity to practice their creations and assure the artistic value of their products. All the products of the centre are handmade with designs inspired by ancient Islamic arts. Foustat traditional crafts centre and the 'Prince Charles' school for traditional crafts collaborated through workshops and courses. The centre is also keen to help new generations of apprentices to hone their skills in this field. The Ministry of Tourism could also facilitate marketing and venue selection for crafts events. Not only will this help promote crafts, but it will also boost the confidence of women and youth to create and sell their products at these events (Abdou).

Methodology

The methodology adopted for this research paper is based on literature review and research of how handicrafts, the tangible arts &crafts have been incorporated in architecture through centuries, across the world. After a detailed study of the same, the research looks at a design proposal which is a suggestive model plan for creating awareness amongst visitors at Varanasi. The proposal looks at careful integration of various handicrafts (listed above), in to architectural solution.

Design Proposal

Varanasi is home to several different indigenous arts and crafts. All of these crafts are prevalent from times unknown, with documented history of over thousand years. Millions of people in India are involved in the handicrafts weaving division that makes up to 26% involvement of India's Rs. 24392.39 crore handicraft exports, the highest in the country. The crafts are unique and are produced with immense calibre and composure, bearing rich traditional value that qualifies them with Geographical Indication (GI) certification. It ensures the uniqueness of the origin of these products worldwide.

The proposal aims to create awareness among the visitors and residents regarding the rich cultural heritage and crafts of Varanasi. A museum has been created as a space to reminisce the past, to enlighten the tourist of the glorious past of Varanasi. The major attractions in the museum are the painting exhibitions, the textile and handicraft

gallery, the seminar halls for conducting talks by famous historians, the heritage library for accessing literature about Varanasi and an auditorium to experience the vibrant history in the audio-visual form.

Source: Authors

View showing the Museum

One of the objectives of the project was to integrate heritage conservation with the social and economic regeneration of the area. Through the design, the artisans are allowed to sell the products of their labour. Shops at different locations in the project can be used for the sale of these products. There are shops of different kinds. Several shops add character to the street while other shops are souvenir shops. Such souvenir shops are a unique platform availed to those interested in GI (Geographically Indicated) products. These are the products with determined quality and character due to their certain geographical origin. The museum provides a unique consumer-artist interface in the form of souvenir shops, which help to boost the local economy.

Source: Authors

View of the street shops

The project also aims at integrated, inclusive, and sustainable development of the city. To achieve this aim it is important to include the various artisans that work in different parts of the city. At different locations on the site, congregational and performance areas are provided. These areas can be utilized for displaying the skill inherited by these artists. Many people are fascinated by such arts and crafts and hence the artists must be brought to centre stage, highlighting not just the art but the artist himself. Not just at Varanasi, but across the country, doing this can boost the morale of the artist community, thus leading to the prosperity of the art form.

Source: Authors

Congregation Area

Source: Authors

Performance Area I   **Performance Area II**

With technological advancement, fewer people want to work as artists, which involve a lot of manual hard work. Due to this, the ancient arts of Varanasi are losing their value. An effort has been made to reclaim their lost glory by providing workshop spaces on the site close to the ghat. These are spaces where visitors can learn varied arts and crafts directly from the artisans. This will help in creating a connection between the buyer and seller, thus bypassing middlemen. These workshops will be conducted at a minimal price. Given that handicrafts are produced on a small scale and require simple tools, craft workshops can be easily carried out. This will ensure a steady income for the artisans while also giving them creative satisfaction. Owing to mass tourism from

different parts of the world, a measure like this would ensure that the art form spreads to different parts of the country and the world.

Another important feature through the design proposal is the use of vernacular features that are used to connect the design to the heritage of Varanasi. The several features that are used are oriel windows, brackets and eaves, different types of arches, and jali walls. All of the buildings are centred on a courtyard, an indivisible feature of the traditional Vranasi buildings.

Source: Authors

Jali Wall

Source: Authors

Oriel Windows

Source: Authors

Bracket and Eaves

Source: Authors

Arched Windows

Source: Authors

Arches in Temple Cloister

Source: Authors

Arches under the Bridge

Such subtle visual integration of building elements, across the built solutions, will leave a cognitive impact on the minds of the visitors and locals as well. Once the architecture starts speaking a common language, in terms of respecting the local handicrafts, it will become easier to spread the knowledge about them far across.

Findings and Conclusion

Traditions & stories have for centuries been passed on to generations and have been kept alive through art & literature. These stories find their manifestation in the various handicrafts of Varanasi, giving the visitors and devotees a visual insight into the age-old crafts, ideologies, and myths as well. Upon studying and understanding the role of handicrafts in the temple town, it was also evident that it is important to make sure that all these traditions survive for times to come. The role that architecture has to play in this is hence major. Architecture acts as a catalyst, as seen from the cases explained above, to host & display these handicrafts for people to see them, appreciate them, buy them and even learn from them. The focus of the architectural proposal is thus to seamlessly integrate these into the existing fabric of the town. The proposal thus has many spaces provided where these arts can be showcased and valued & bought. The museum will be a perfect place for showcasing the skills of the local artisans meanwhile the shops are provided to buy these objects that are a marker of Varanasi's rich culture. Tangible or intangible, art will always be a representative of the culture of a place. By proposing performance areas where people can consume these forms of art, and by having workshop spaces where people can learn these art forms, are ways of integrating these intangibles into the lives of the visitors of Varanasi.

In conclusion, the research and the design proposed, highlights the key role that architecture plays for creating consciousness in valuing the rich art, culture, and heritage that any place embraces. Further, it is also an indication that such proposals across the country, will act as hubs for promoting our tangible and intangible connections with art and handicrafts, region to region, and across the world as well. This research can thus be furthered by using it as a framework for identifying such sites across India and creating design proposals to help revive the state of handicrafts in India.

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Enrichment of Godhadi: A Legacy Through Grandmother's Tradition and Inspiration for Artisans

Rakhi Charwad & Alka Khade

Abstract:

Godhadi is a traditional and hand-stitched Maharashtrian quilt. Made from old sarees, curtains, cotton cloth, used bedsheets and all discarded fabrics of different types without wasting anything. The final result is a type of collage. It's a combination of different types of cloth, textures, colors, folds, and shapes. It is a traditional craft type in which all types of fabrics are reused.

Thus Godhadi (a thick blanket) keeps creating memories and pass it on from one generation to the next generation. It is a great aesthetic value with affection we receive from our Grandmother through the medium of these Godhadi quilts. It never ages though users and viewers get older. It is a warm blanket that speaks about memories and makers, especially women.

Godhadis have been around in Maharashtra for centuries. These lovingly handstitched Godhadis are turned into soft quilts as warm and precious as a love of Grandmother. Godhadis are preserved from generation as a symbol of maternal love. They talk about the stories about the alive hands who made them.

This paper is focusing on the International and National level participation of the product of Maharashtra. This is the time of the revival of the Godhadi. Maharashtrian Godhadi is displayed in International Design and Fashion Market. Grandmother's Godhadi with weaving memories goes to global and it deserves. The paper also studies the artisans who took inspiration from this Godhadi art and craft.

Keywords: Godhadi, quilt, tradition, hand stitch, art, tradition, culture

Aim: To understand the Godhadi art presenting culture and tradition of Maharashtra.

Objective:

   i.   To study the emotional values of Godhadi

  ii.   To recommend the learning and teaching of the process of the *Godhadi* technique to common people to make it more popular with all generations.

 iii.   To increase the commercial value of Godhadi Art.

1.0. Introduction:

Godhadi making was a community activity among rural women. It is a very smart and efficient way to recycle old sarees and other fabrics. White thread is being used to stitch instead of colour thread. Godhadi is a traditional and hand-stitched Maharashtrian quilt. Made from old sarees, curtains, cotton cloth, used bedsheets and all discarded fabrics of different types without wasting anything. The final result is a type of collage. It's a combination of different types of cloth, texture, colours, folds and shapes. It is a traditional craft type in which all types of fabrics are reused. The *Godhadi* making is a traditional art and is maintained from one generation to the next generation (Ref. Fig. 1). the current scenario of this product is completely changed and now it is converted in the form of gift articles, collection pieces, and helping to store

the memories. the demand from the national and international platform encouraging this craft to produce the product in quantity to increase the business.

Fig. 1. The Maharashtrian women's stitching Godhadis

2.0. Methodology:

Godhadi is an indigenous art and product of Maharashtra. The information about this product was collected via live interviews of the artisans and the Digital information source. for the product study, the actual samples were collected and documented the observations were. for the analysis of the product, The Other blankets were also studied. For the information purpose, the library book sources were also studied to collect the related information. Data has been collected by observation of the product. Also, interaction with *Godhadi* artists. Also, data were collected from the articles included in the reference. The product inspired many artisans to paint and create various products. The researcher is also having the fine art background. during the study the artisans who developed some paintings where studied and documented here for the information purpose.

3.0. Discussion.

Godaddy art inspired many other artisans to develop some other products or paintings. in this study some products and professional Painters are discussed here.

3.1.Shashikant Dhotres paintings.

Shashikant Dhotre is a painter from Solapur Maharashtra. he completed his education from sir JJ school of art Mumbai in fine arts. Shashikant is known for his paintings especially inspired by the village place women and their day to day activities. in one of his paintings, he especially highlighted the women's stitching of the *Godhadi*. the series on this subject was very popular

and appreciated on the national and international platforms. During the study of *Godhadi* its painting specialist studied and documented. (Ref. Fig. 2)

Fig. 2. Shashikant Dhore's paintings inspired from Godhadi art.

3.2. Ramchandra Kharatmal's paintings.

Ram is one of the popular contemporary artists from Maharashtra. The art of *Godhadi* is alive in his paintings through many varieties of subjects. He took inspiration from his mother as she was conducting sewing classes of girls at his village. This was the reason which shaped his interest in art, fabric, patterns, colours and fashion in the form of paintings. Ramchandra incorporates the running stitch in his paintings because of which every painting reflects with depth of Godhadi forms. (Ref. Fig. 3).

Fig. 3. Ramchandra Kharatmal's paintings

The Godaddy art really inspired many Painters. Ashwini Nakate, Shrikant Kadam, Vivek Nimbolkar, Shruti Dandekar and many more Artists and students Develop their paintings. for the study purpose, the above-mentioned artists and their paintings were also studied for analysis.

3.3. The new trends in Products.

The *Godhadi* art is the traditional craft of Maharashtra. This art also inspired many other designers to take inspiration and use this application to give traditional look to their products. The young generation especially appreciates and supporting traditional applications. Some products e.g. laptop bags, purses, jackets, sitting mats, back doormats and many more products. The young generation supporting the *Godhadi* artist by encouraging them to arrange their work display for sale. They also take this product on an international platform for expanding the business and getting visibility for this product on an international platform. (Ref. Fig. 4)

243

Fig. 4. The new trend products inspired from Godhadi.

The quilt-making process is time-consuming involving a stitching pattern in straight parallel lines and requires each woman to dedicate a minimum of 15 days per quilt. The women earn on a per piece basis that ranges between Rs 150 for bags Rs 1,000 for quilts. Though their

Pune based Archana Jagtap and Rucha Kalkarni founded a social enterprise 'Quilt Culture' in 2015 with an aim to keep the ages old culture of quilting culture alive. This group work precisely on traditional Maharashtrian quilting style. Almost all products are hand stitched. To keep the aesthetic appeal, they use sarees like Irkal, Jijamata, Narayanpethi and fillers are made of Nagpur cotton.

Income differs depending on the number of orders they get, each member earns an average of Rs 7,000 every month. What makes this job exciting for these craftswomen are the new experiments, designs and learnings that come with each fresh collaboration, workshop or exhibition. (Ref. Fig. 5)

Fig. 5. Rucha Kalkarni and Archana Jagtap helping Godhadi crafters.

Conclusion:

1. Maharashtra is having rich past and culture. *Godhadi* is one of it. It is having sustainable approach.

2. It has successfully made a creative commercial product in domestic and international markets now. This *Godhadi* is Empowering the Women and reviving our tradition.

3. In this age of consumer culture *Godhadi* is preserving memories with emotional connect. To prepare *Godhadi* by used cloth is what we should learn.

4. The poor villages never have any exposure about the national or international market. the traditional *Godaddi* art was completely neglected. The young generation strongly appreciating our own culture and supporting our art and craft. the product branded on social media platforms and digital media. the generation also takes this artisan to various exhibitions Tu to sustain this art financially by achieving some business.

5. The government needs to support this art and consider it for training in craft schools.

6. The permanent gallery needs to make available to this community to make the product available for customers.

7. The bank needs to support these artisans in the critical financial period and also provide loans to expand the business.

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Conservation of Miniature Painting- A Case Study

Ashwini Kalyani

Abstract

The act of conserving historically significant artifacts has enabled humanity to look at history through the lens of time. Conservators across the world historically have tried to evolve the process of preserving a part of history to ensure the authenticity of the piece.

The deteriorated old painting's curative conservation and its treatment is a delicate and critical intervention in cultural heritage conservation. Most of the time, the conservation methods implemented by used material, such as the pigments used in the reintegration of a painting, need genuine and nearing the same compositional structure of the original pigments present in the artwork under restoration.

This article attempts to present a case study of the conservation of a miniature paper painting. And the eventual aim of conservation is to ensure the prolonged life of the restored painting, and it shall include the transmission of cultural heritage knowledge to the further generation.

Keywords: Miniature paper painting, Artifacts, Cultural Heritage, Curative conservation.

"Painting cleanses the mind and cures anxiety, augments future good, causes the greatest delight, kills the evils of bad dreams and please the household deity" –

 "Vishnudharmottara Purana" (Gupta 2006: 01).

Introduction

The tradition of painting in India goes way back to pre-historic times, which is noted in several parts of India found in the caves. The part of preserving the old artworks in a tropical country like India is of utmost importance. Indian paintings are in many different forms it the miniature painting is one of the forms of painting that fascinates one and all across the country. The word miniature painting is either the small format of painting or the Latin word "miniature meaning paint with red color. In the present scenario, the word refers to the format of the painting in general. The earliest examples of the Indian miniature paintings can be noted in the West part of India on the palm leaves some were around the 10th – 12th century AD. The palm leaf is later replaced by paper from the 12th century onwards. Also, some of the miniature paintings were done on the textiles is also noted. Along with the material used the techniques incorporated in the execution of these paintings is different in India and the European Countries. Indian miniature paintings have specific methods of execution. As the primary form of art, appreciated by scholars and laypeople alike. Artists have used several types of media and treatments to these for the best possible representation of their feelings. Unfortunately, since the painting is a composite material having various organic and inorganic constituents in its structure, which makes it all the more prone to deterioration (Gupta 2006: 24). Because of the delicate nature of these paintings, several of them worldwide are extinct today. The artworks, generally executed on paper, are particularly sensitive because of their hygroscopic nature. It is a general

concern for these paintings, which being part of our cultural property; their need is to be conserved.

This case study is an attempt at the conservation of miniature painting. The process involves documentation, identification, and examination, with proposed conservation treatment.

Identification of the problem in the painting

In this process, the 1st and foremost important step is the identification of problems in the painting. Then, an examination is a measure implemented before proceeding to the proposed treatment. The decision of conservation of a painting depends on the nature of deterioration. So, to know its actual condition for deciding a suitable conservation treatment, a proper examination and diagnosis of the cause of its damage are of supreme importance. There are several causes of deterioration that one should note during the investigation.

Preparation of the support and its condition – Multilayers are present in miniature paintings on a wasli paper board
Strength of the supporting paper – Assess with age, whether fragile or embrittlement.
Presence of inscriptions at the back of the painting sometimes
Presence of acidity
Presence of old earlier restoration, if any
Presence of fungus
Insects – Silver-fish and book-warms
Stains and Spots
Discoloration of the paper
Charring of the paper
Solubility of paint – Checking the color's solubility in various solvents is needed to prepare for the treatment
Cracks on paint layer – Mostly cracks occur due to aging
Note: Use of appropriate material during making a miniature painting leads a prolonged life to the artwork.

Table 1: *Identification of the problem in the painting*

The method of examining painting depends on classification, whether it will be a destructive or a non-destructive method. A destructive examination is where a representative sample of the material to be tested is needed. As the term implies, destructive analysis entitles a significant amount of the original constituents of the painting consumed. On the other hand, in a Non-Destructive examination, either nothing or a very insignificant portion of the painting material gets sacrificed.

In this case study, non-destructive examination is implemented

Possible Means of Examinations
●   Examination by Unaided Eye with proper light
●   Use of Magnifiers
●   Use of Microscopes
●   Ultra-violet Light
●   Infra-red light
●   X – Radiography
Note: Examination with simple methods is recommended.

Table 2: *Possible Means of Examinations*

In addition to those as mentioned earlier relatively simple methods of examination, there are many more sophisticated methods, which can be employed to gather further information regarding the material and technique used in the execution of a painting. Some of these are destructive, while some are non-destructive. So the proper interpretation of the observations is of supreme importance.

In the process of an examination, below following points are noted:

IDENTIFICATION - of the object of the case study	
Type of object:	Miniature Painting
Shape:	Rectangle
Size:	24cm x 14.2cm
BRIEF DESCRIPTION - of the object of the case study	
Miniature painting is in poor condition with improper restoration. (Earlier restoration noted)	
Dust and dirt deposition is present all over the artwork	
Cockling and many cracks, creases, folds are present	
Flaking of color noted	
The lost area at many places	
COMPONENTS AND MATERIALS - of the object of the case study	
SUPPORT	
Type	Paper
Color	Light brown

PAINT	
Type	Aqueous pigment
Color	Brown, Green, Red, Orange, Blue, Black
Solubility	Yes
NATURE AND EXTENT OF DETERIORATION (deterioration is shown in a graphic form)	
SUPPORT	
Brittleness	Yes
Fragile	Yes
Discoloration	Yes
Cut	Yes
ACCRETION	
Dirt	Yes
Mold	No
Stain	No
Rotting	No
Rust	No
Foxing	No
GROUND	
Losses	Yes
Holes	No
Flaking	No
Abrasion	No
PAINT IF USED	
Losses	Yes
Flaking	Yes
Holes	Yes
Abrasion	No
Discoloration	No

ACIDITY TEST: Acidic Level - pH less than 7
DOCUMENTATION REDORDS
Photographic documentation record: Before treatment (Refer image 1), during treatment (Refer image 2- 11), and after treatment (Refer image 12) done
Graphical documentation record: Done on a graph. (Refer image 13)

Table 3: *Process of Examination and Documentation*

Proposed concerned treatment

Dry Cleaning

 Dry cleaning is the next step after examination. The first step in the cleaning operation is dusting with soft flat Japanese brush (Agrawal 1984:163).

Removal of wasli

The support used in miniature painting was usually not a single layer of hand-made paper. There were several steps involved in painting on paper. The first step was the preparation of paper- board known as the *wasli* in India (Agrawal 1984:139). It consisted of two or three layers stuck together with wheat flour paste / starch paste.

The condition of earlier restored wasli was not in a sound state, so it was decided to remove it with distilled water and ethanol in a 1:1 ratio, as in the solubility test colors, were bleeding, so the precaution was taken to use minimum water to protect the paint layer. However, after the removal of wasli, the support of the painting was not in a sound state. Therefore, the painting is in poor condition was noted. (fig.2)

DE acidification

The yellowing and brittleness of the paper of a miniature indicate that the painting may have acquired some acidity (Gupta 2006: 69). Acidity develops in the paper due to the manufacturing defects, polluted gases, and used materials in the artwork for mounting and backing, and aging. DE acidification implies either removal or neutralization of acidity present in the painting, (Gupta 2006: 69), the acidity test result was positive as the pH was less than 7, tested at the back of the painting.

Non-aqueous de-acidification to neutralize the painting is one of the safe method implemented, considering the paint layer and its sensitivity towards the water. The de-acidifying reagent dissolves or suspends in a solvent other than water. This method has a preparation of 2% solution of barium hydroxide in methanol. That is, 2gm of barium hydroxide is mixed in 100ml of methanol. Then, the reagent is applied with the help of a brush at the back of the painting, needing de-acidification. Barium hydroxide penetrates the fibers of the paper paintings and converts them to magnesium bicarbonate because of carbon dioxide in the atmosphere. And the result of the acidity test after de-acidification was negative as the pH check was 7.

Strengthening / Reinforcement

Reinforcement means strengthening the various weakened constituents of a painting (Gupta 2006: 75). It involves repair and strengthening the support. It also includes re-sizing of paper locally or completely if it has lost it during the process of degradation

(Gupta 2006: 75). Sometimes small holes are produced by insects or the effect of acids or fungus— the mending of the tear of the painting. Creases and folds formation, in case of fragile support, has to be treated by full lining. In the strengthening of miniature paper painting, two things are considered necessary. One is the type of the new paper used (hand-made papers of varied thickness 6, 8, 12, 15 GSM) and the kind of adhesive used to prepare it.

Adhesives used in lining

The adhesives used for lining of miniature paintings should be such that it neither affects the physical features of the painting like color, porosity, and flexibility nor does it interact chemically with their constituents (Gupta 2006: 80). Paste prepared from wheat starch, wheat flour, and carboxy-methylcellulose (CMC) are the most commonly used adhesives for lining miniature paintings (Gupta 2006: 80).

Here 5% starch paste is made using 100gm of starch powder and 500ml of distilled water. Initially, kneaded dough out of starch powder and 50 ml of distilled water and remaining distilled water poured into the kneaded dough container and kept for 2 hours. Then the dough is squeezed into a uniform milky solution; the solution free from gluten is heated to boil indirectly to form a paste. Addition of Benzal Konium chloride acts as a fungicide and preserves the starch paste for a day to work.

Lining

The fragile paper support of the painting is likely to get further damaged during handling or when adheres to cardboard or mount board acquired by acidity due to aging, removed from boards, and is reinforced by lining with one or two layers of paper. As lining covers the complete back of the painting and thus can be considered obscuring its originality to some extent, it is opted for only when it is really necessary (Gupta 2006: 78).

The painting face down on a dry melinex sheet spread evenly on a smooth table in the lining procedure. It is then moistened uniformly from the back while the starch paste is applied uniformly and thinly on the porous lining of two sheets of hand-made 15 GSM tissue paper. Lost and cuts areas are filling with 15 GSM handmade paper –pulp. After applying the paste, the lining paper is lifted and placed over the back of the painting and brushed down simultaneously to ensure proper contact between the two and prevent the formation of air bubbles between them. When air bubbles persist, the use of a stiffer brush vertically helps release the trapped air. Proper contact of lining paper and back of the painting ensures by pressing it with hands or brush after covering these with melinex sheet laid over the table to prevent the painting from sticking to the table. (Ref Figs 3, 4, 5, 6, 7, & 8).

Drying, Filling, and Retouching

When the lining process is complete, the whole composition is allowed to dry in controlled condition (Shade) to prevent the painting from becoming wavy (Gupta 2006: 82). Let it dry after fixing it on the table at the edges by pasting the guard paper strips. After the completion of the curative treatment, the lost areas of the paintings create discontinuity in its design and distraction in its appreciation (Gupta 2006: 110). The restoration of the discontinuity in the lost areas in the painting fulfills by leveling and retouching. The material used is the closest to the match of the painting, and one tones

down the original in retouching. After leveling and retouching, the stretched painting is carefully separated from the table. [Fig 9]

Preventive Coating

Consolidation of paint refers to the reinforcement of the paint layer (Gupta 2006: 61). Its purpose is to provide adhesion between the paint and the ground layers in order to control flaking of paint, to close the cleavages between layers, and to provide cohesion to the powdered and pulverized paint (Gupta 2006: 61). The consolidates are fixative, and the prime condition it provides intended protection and is reversible.

The requisites of an ideal consolidator for paintings are:

- It should provide adequate adhesive strength.
- It should be colorless and nontoxic.
- It should be reversible and should not affect the colors of paintings.
- It should not alter the color gloss of a painting surface, should not get discolored with age.
- Its viscosity should be such that it can reach the area required to be consolidated through the cracks or the losses in paint.

Some common consolidates which have some advantage and some disadvantage.

Poly Vinyl Acetate (PVA)

Poly Methyl Methacrylate (PMMA)

Cellulose Acetate

Paraloid B-72

Methyl Cellulose

Out of this Paraloid B-72 is an acrylic copolymer of ethyl methacrylate and methyl acrylate in the molar ratio of 70:30. It is one of the most suitable thermoplastic resins and remains soluble even on aging. Also, it is not as hard or as brittle as most of the other consolidator and does not require additives to modify its mechanical properties. However, since it has considerable gloss, noting that it does not remain on the surface of the painting. It also has the property of solvent retention. Though toluene, xylene, acetone, etc. are used as a solvent for it, Para-xylene seems to be the best choice, as its relation in the resin film is relatively low (Gupta 2006: 63). So, after conservation treatment to the painting, a preventive coating is applied over the painted surface. 2% paraloid B-72 in toluene is used with a soft brush. It is reversible in nature.

Mounting

Even after restoring the painting in the best possible way, it remains quite delicate and needs protection (Gupta 2006: 111). The painting is, therefore, not to be kept or handled unsupported; it should be mounted or kept sandwiched between mount boards. The mount boards should be of pure cellulose and acid-free (Gupta 2006: 111). Mountboard used should act as a buffer against RH fluctuation and protect it from physical damage.

The mount should not stick directly to the painting instead should stick, with tissue paper hinges. It allows space for the painting for expansion and contraction. Paper hinges can be fixed at the top and let the painting hang on them. A window–cut mount is attached to the backboard like a folder, which presses the edges of the painting, yet

leaves the main painting visible. This type of mounting helps prevent painted surfaces from coming in contact with the glass frames or Perspex cover of the frame is used. (Refer Figure 10 & 11).

Conclusion

Paper painting is one of the most delicate of all paintings. It slowly deteriorates by the cumulative effect of the hostile environment, deficiencies of the material and technique used in its fabrication, and, above all, improper handling. The process of deterioration is not conspicuous but it is gradual and continuous. Therefore, to save such paintings for as long as possible, should take precautions at every stage of their existence. The handling of the paintings should be strictly in accordance with the standards laid down for the purpose, and apart from the control of the environment within optimum limits. Shocks and jerks, while lifting and dropping of the paintings, are often responsible for losses of 'negligible' and 'insignificant-looking specks of paint. Significant damage is results if such kind of shocks and jerks are repeated while rough handling of the paintings. The problem needs to encounter with prime importance, as every bit of damage of a painting is important irrespective of its cause of damage. The love for this form of art is generated to those who have work with these paintings, or else no amount of pleading is going to help in this kind of case. Conservation that involves some interaction with the actual painting it is likely to affect the painting even though any alteration in the appearance of the painting is not desirable and, thereby providing it a new lease of life with strengthen the composition of the painting and giving a justification to the very existence of the painting is at stake. It can be considered the "Health Treatment". It is not appreciated if the look of the painting is changed just to give it a face-lift and add some subjective element. It can be the retouching of the losses in the paint with some details claiming such interaction as the "Cosmetic treatment". It can be needless interference with the painting; this argumentation may not find favor with many, as the ultimate goal of the conservation treatment is for the strengthen and give longer life to the painting. The ethics is to preserve the painting to the maximum. But in some cases, the foretaste of restoration may be widened within some limits to increase the impact of conservation. Therefore for the ethical conservation of a painting, the health treatment is important and essential, while the cosmetic one can be optional.

Photographs

Figure 1: *Photographic documentation of the painting pre- conservation treatment*

Figure 2: *Painting after removal of wasli*

Figure 3: *Wasli preparation process*

Figure 4: *Wasli preparation process I*

Figure 5: *Full Lining process I*

Figure 6: *Full Lining process II*

Figure 7: *Filling the lost areas*

Figure 8*: Full Lining with Guard Paper*

Figure 9: *Painting after reintegration*

Figure 10: *Window Cut Mounting I*

Figure 11: *Window Cut Mounting*

Figure 12: *The painting after conservation along with mounting*

Figure 13: *Graphical Documentation – Deterioration noted during the process of investigation of the painting*

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Revival the Terracotta Craft by Master Craftsman Mr. Om Prakash Galav (Success Story)

Kapil Sharma

Abstract

I don't have to tell you that making a living as an artist is tough. Working long hours, constantly changing things and obsessing over the smallest details, enduring rejections, again and again, struggling financially... Then why do we do it? Because there is no other way for us, it's in our blood, our DNA. But while enduring the mood swings of the business we're in, it's easy to get discouraged and even start dreaming about that cozy 9 to 5 office job.

Being a full-time artist is challenging but the rewards can be out of this world. There is no greater feeling than watching your dream piece come to life just the way you wanted, how he started his life and struggled for his craft life journey to become a master craftsman and National Awardee Mr. Om Prakash Galav from Ramgarh Alwar, He has been working for Three Decades in Terracotta Craft and achieved many awards and Recognition and showcased his masterpieces across the Globe. As per his achievement to develop to lesser than mm from bigger than 14 feet terracotta crafts on Potter Wheel. he has got Registered his crafts in Limca and other world Records.

About Pottery Art

Pottery art is one of the ancient arts of India. Earlier, in this art pottery was made by hand, gradually when the Wheel (chak) was invented, then after that, the pottery was made on the chack and they were baked in wood and dung cakes under the ground and gradually innovated in this art and nowadays products are being made on electric chack. furnaces are also being used in nowadays to bake products, in earlier times they were usually baked products in furnaces with saw dusk, wood, gas, and diesel.

Alwar's delicate Kagazi Pottery has a rich history. Skilled craftsmen made pots, not more than 1.5 to 2 mm thick, that felt as light as paper. However, beyond the Murals of Molela there has been little recognition of the diverse pottery skills of Rajasthan. Om Prakash Galav has revived the diminishing crafts of Alwar and brought critical focus on its uniqueness. He has transformed the way Alwar Kagazi Pottery takes shape and has changed its perception beyond its functionality and versatility. with his knowledge of traditional pottery techniques, he has devised a wide range of terracotta cookware and serves wares, suitable for contemporary cooking and modern kitchenware design.

His work in terracotta pottery, miniature pottery, and fine cutwork pottery are admired across the globe. The miniature work is so intricate and detailed that it often deceives the naked eye, one requires a magnifying glass to see its details.

His works were part of various national and international exhibitions and museum collections.

There are many young artists receiving training from him, they have started honing their skills and developed unique forms of traditional pottery. This has also led to Ramgarh being considered as a tourist destination.

Keywords: Terracotta Craft, Kagazi Pottery, Miniature Pottery

Introduction

Om Prakash Galav *Master Craftsman Terracotta Pottery Ramgarh (Alwar) Rajasthan*

Today in the art world, Artists leave an indelible mark on society by doing their artwork with all their hard work, which gives them fame and a name in the form of their artworks. But in the life of every artist, there are many chapters of tireless hard work, they have to face many challenges in their life, and only after that, they are able to achieve their destination. Due to this many artists are not able to reach their destination and their whole life goes out in this hustle. He cannot do anything else but is able to give a new dimension to society. Although all the artists have the same tool, their imagination and creation get visualized in beautiful structures through a different mediums.

In this mention I Kapil Sharma highlights the difficult art journey of one of my friend master Om Prakash Galav's lives, who is a resident of Ramgarh, Alwar. How he started his craft journey and transformed it to the paper (KAGAZI) pottery with a new Dimensions of Terracotta Craft.

Methodology

About his journey

Pottery work is being done in his house from the time of his grandfather's great grandfather, he is around 15th generation who is taking this terracotta craftwork forward. He learned this work from his father Late Shri Fateh Ram Prajapat Ji. He was a skilled handicraft Artist of his time. He also received the 1989 State Efficiency Award. But due to the lack of better marketing system in the village and lack of connectivity to the cities, these Craftworks could not be carried forward much and continued to live in poverty.

In the year 1998, he also had to leave his studies after 10th class due to the poverty of the house, he had to engage in this work, slowly he learned this work and started to refine his skills, that time as their financial conditions were not as much good, they were living in a tin shed and used to work in the same, their ration card was not even in the category of BPL also and did not get any other kind of help from the government. In the initial period, he used to go to sell his pots with his mother in the nearby village and sell them in exchange for wheat and bajra, this system was very old but new to him because he had never sold anything like this but it was the requirement for his survival to market utensils this way too. Waking up every morning at 3-4 a.m. carrying the utensils on a bicycle in sacks, taking them to nearest villages around 10- 15 km away and then selling them and coming back regularly also a very tiring task to his family but that was the time of his struggle which were slowly passing and he was developing his skills slowly aside with his work that time.

In the year 2001, the District Industries Center and Rajasthan Chamber of Commerce and Industries Jaipur, helped him to forward his craft works. He also applied for a loan under the Margin Money Scheme of the government but that was not accepted by the bank and the loan was not given.

In The Ministry of Textiles, he applied to the Artisan Credit Card Scheme of the Government of India, in which the artisan was given tentative amount of up to Rs. 2 lacs to Promote and Develop their works, he applied for the same but the bank refused to sanctioned it due to the security So he mortgaged the registry of his plot which was in his father's name in the bank in the year 2003 and in Artisan Credit Card scheme at that time he got a loan of Rs. Twenty thousand and his father got a loan of Rs. Twenty-five thousand which was very less to execute the setup of his studio and develop the craft works. He did not get the sufficient money for his necessity and tried to renew it again and somehow bank increase the amount and in the year 2003, they built some pucca houses and got some relief from the problem of rains, in an exhibition organized by the District Industries Center Alwar he started participating in and selling their products frequently that gave him financial strength and people got more information about their work. He came in contact with the Rajasthan Chamber of Commerce, and also participated in many seminars, and started training the people around him through these.

He received invitations for workshops and seminars from different countries but could not able to accept them because He did not have a passport for these visits, so applied to get it and tried to get a verification certificate from many administrative officers for that. But verification certificate could not be generated, due to which there was a delay in getting the passport, he met Alwar District Collector Mr. Dinesh Kumar ji and told him about his whole concerns, taking immediate cognizance of this, he got a verification certificate immediately by Additional District Collector City Mr. PC Sharma Ji, due to which he got his passport correct. Got it on time and was able to join this journey.

This visit proved to be very important for him. In this journey he saw at what level other parts of our India are being displayed here, what kinds of designs are there, what was the requirement here, it was surveyed a comprehensively, and his art going forward this sequence, he also got involved in technology and computer knowledge was also well received in the Netherlands itself. And here he also used the computer for the first time, after coming back from the Netherlands, he also bought his computer

with the help of the Rajasthan Chamber of Commerce and Industry and started connecting his work with technology, gradually he was developing his craft skills and has also been selected for the District Level Handicrafts Award for the year 2003. In the year 2006, when the Industries Minister of Rajasthan, Hon'ble Narpat Singh Rajvi ji Ramgarh, the General Manager of District Industries Center, Shri Avinash Kaushik ji brought him to his studio and discussed how we can take Ramgarh clay pottery name forward in this, the Honorable Minister asked to send documents for the selection of Ramgarh in the cluster development plan, for which he prepared the documents of Ramgarh and worked on it with the institutions and in 2007 Ramgarh was selected in the Terracotta Cluster Development Scheme and its work started, he tried his best that people should join it and take advantage of government facilities, but there is a shortage in the artisans that they cannot stay organized, that is why this cluster The development plan could not be successful in Ramgarh, although he got full cooperation from District Industries Center Alwar to District Administration Alwar in this plan, then-District Collector Shri Bhaskar A Sawant Ji also issued an order to allot land for making CFC in Terracotta Cluster. But in the sense of not being able to make a society by hand, that land could not be allotted, which he regrets even today, still, he went ahead in it and through other institutions kept training for this work to other people also and started participating in other state-level exhibitions in the year 2008, he was selected for the State Efficiency Award 2006, 2008 & 2010, he had to struggle a lot for this. During this, he was constantly trying for the National Award but was not getting success. His efforts continued and got the opportunity to create new artworks.

Projects and World Records

He got a project to make a Coca-Cola bottle of 10 feet clay art for Coca-Cola India by an organization in Delhi in the year 2010, but the time was very less for that. He accepted it too and worked hard day and night to prepare that bottle with his team, whose ceremony was held at Delhi Art College and Pragati Maidan. There were everyone surprised to see that 10 feet Coca-Cola bottle of clay due to its scale and proportions and praised for his artwork, this bottle was included in the Limca Book of Records 2012 by Limca Book of Records, which gave him more fame, and, by that success, he encouraged to do better work in future.

When he got fame after making this Coca-Cola bottle, he thought that some work should be done socially through art, for this he was not financially strong but his thinking was positive and right. He decided to do another huge artwork to give a message to society on the occasion of World No Tobacco Day in the year 2011. For this event, he decided to make a huge clay art hookah on which it was proposed to depict the ill effects of tobacco. The task was very complex. It was also a difficult task in itself, yet he started this work and gradually started getting the support of people in that work and made this artwork, in this people also helped him financially. the Medical Minister of Rajasthan was invited to unveil this artwork with the help of the Honorable MLA of Alwar city Banwari Lal Singhal ji. When the Honorable Medical Minister unveiled the artwork, he was shocked to see it and praised it at the same time, it was decided to put that artwork in Sawai Mansingh Hospital Jaipur by the Authorities and on May 31, 2011, it was inaugurated on the Honorable Minister at Sawai Mansingh Hospital, when

this artwork was installed there, it came to the headlines in the media which were seen by thousands of people and got recognition and this artwork was recorded in the Limca Book of Records in the year 2012 and Unique Book of World Records 2012 as the world's largest artwork in Clay, which gave him another new recognition in the Field.

Transformation of Terracotta Craft into Miniature Pottery

At the same time, he was also making miniature pottery for the national award, because every year his spirit was broken due to the cost and loss incurred in carrying big artistic products, that's why he decided to make miniature pottery so that he can use it when the miniature pottery was ready and presented to the award committee in Jaipur, everyone appreciated the work and made sure to send it to Delhi for the next meeting.

Recognition and Awards

"Shri Om Prakash Galav Receiving The National Award 2010 from Hon'ble President of India Shri Pranab Mukherji for his Excellence in Terracotta"

Sending these items to Delhi gave him a lot of satisfaction and a new belief that maybe these crafts of Rajasthan could lead him towards National Award because these types of artifacts of pottery from Rajasthan were never sent before for National Award and finally the time

came when the last meeting of the National Award took place and Miniature Pottery was selected for the National Award 2010, it was a matter of pride not only for him but for the whole Family and Rajasthan. The miniature pottery created has also been included in the Unique Book of World Records 2014 as one of the world's happiest clay artifacts.

Along with this, he has been giving training for this work through other programs in different regions of the country through government and non-government organizations, in which he has also given training to people in the cluster development project, as well as working in the field of various arts. Worked with institutions and also took workshops of this art in many colleges, in which students were introduced to this art and explained its importance.

In the year 2013, he again got an opportunity by the Government of India to exhibit art at the international level by which he participated in the Spring Fair Birmingham 2013 held in England and exhibited his artworks, during which continued to receive the next awards in which Received two awards by the World Craft Council in UNESCO Award of Excellence for Handicraft in 2012 and 2014, his work was also displayed at the World Craft Council's Golden Jubilee Ceremony held in Nantong China in 2014.

After this, in 2015, he got an opportunity to showcase art at the international level, in which Namaste Stockholm program which was held in Sweden demonstrated his art there, in this program the Minister of Women and Child Development of India, Smt. Maneka Gandhi organized the program. The Hon'ble President of India, Shri Pranab

Mukherjee was present at the inauguration ceremony. In the year 2016, he was also invited by the Government of Madhya Pradesh to the International Symposium organized at the International Simhastha Mahakumbh held in Ujjain, in which he also gave lectures along with the live demonstration of his craft works.

Along with this, he also participated in famous exhibitions organized in the country, in which he participated in Master Creation Dilli Haat, Terafest Triveni Kala Sangam, Nature Bazaar Andheria Mod Delhi, Dastkari Haat market by Samiti etc.

In the year 2017, he was also selected for the Master Artisan of the Year in the international awards given by Craft Village India and from here got the opportunity to display products in a better place. he got an opportunity to sell through the exhibited art in India Craft Week 2017, 2018, 2019 in which his artwork was highly appreciated and he was introduced to art lovers and got opportunities to create new artworks Through Craft Village India, again in the year 2019, he got the opportunity to showcase my products at the India Craft Week Preview Nehru Centre London in the London Craft Week 2019 held in England as well as the Miniature Pottery Workshop was also organized there in which people highly appreciated his miniature artworks.

Along with making new designs in this soil art, he was continuously taking this work forward by incorporating his ancestral designs and for this his name is recommended frequently for India's prestigious Padma Shri award since last 3-4 years. It is also being nominated by various MLAs, MPs, and institutions.

Along with this, he also got a lot of information about the paper pottery of Alwar and remembering some very old utensils had seen in his house in childhood, he decided to revive it again and bring it into circulation. In this series, he started making products of paper pottery (very thin layer of clay) in which he chose the main lota shape because it is such a design of our India which is found in the green area and it can find everywhere. It varies a lot, when initially made they were very thin but there was no work on them, only the shining, due to which they were not getting a good response, while continuing this series, he also did cutwork in it, which increased its usefulness. It has also become more beautiful and now it has also been liked in the market and it has also received international honor in the form of the UNESCO Award of Excellence for Handicrafts 2014 from the World Cup Council. Gradually, paper pottery has been accepted internationally. It was also done and people are getting to see an old art that was on the verge of extinction again in a new form. In the year 2019 itself, he also exhibited his art at the International Festival held in Nepal.

News in Media

Results

When we come to know about the art practice of an artist and the struggle of his life, when we try to know about him, to give new dimensions to the art, an artist does spiritual practice throughout his life like a seeker and reaches to his destination. But many artists are not able to succeed in their art practice due to a lack of help and get discouraged. In this mention, I have highlighted the challenges of the life of Master Craftsman Shri Om Prakash Galav and the successes achieved after his hard work day and night, as a result of which young artists can get inspiration and they can continue their art practice.

The identity of the artist spreads through his art in all four directions and takes him to his desired destination. We should take inspiration from their life and continue our art practice.

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Paper contents are truly based on the personal interview with the master craftsman Omprakash Galav author had a visit to various workplaces of the craft man and collected all required data for this paper.

The Bookplate Art and its Functional Values

Ishu Jindal & Jaya Daronde

ABSTRACT

The bookplate is a measure term to denote the printed image and picture pasted on the inside the cover page of a printed book to show ownership, this term is associated with printmaking, it is usually associated with the term Ex-libris which means "from the library", and here the meaning and purpose are different to create these small works. A bookplate is designed by graphic designers as a work of art and reproduced through one or more original printing techniques or designed and reproduced with following some techniques of printmaking. This is reproduced by the artist is special for the user and is a new value added to the book. This category of work of art which is functional value is a new activity in our society that is designed, reproduced, and applied on books. Art activity of bookplate has been increasing in the world and in our country not much familiar but artist reproduce some bookplate art. There are national and international organizations that organize these activities. Entering the cultural life of the society and the graphic field artists Ex-libris is associated with the book, which is an important tool for artist to explore the new method of printing to develop. Bookplate evolution had consisted of many crossing the purpose of uses for bookplate art trends.

The bookplate started as a simple inscription in the middle Ages. At that time the inscription is integrated on the plate and the date fixed as a record gift, to bearing a name. Author signs below the paper. Bookplate to be seen in the much-decorated, this time bookplate concept is only too followed for an ornamental frame. But crossing the era the motive of the bookplate has been changed from time to time. It has detached from its original indication role for the book and became independent as a unique graphic work. The functional value of the bookplate continued to expand globally day by day with the influence of various international associations, international congresses, contests, and exhibitions together with the printing artists sharing it among themselves. Bookplate designs are often visually stunning and have changed over the ages, today bookplates have become art pieces and collectors' items. Artists would be diverted for this meaning and expand to all kinds of related to bookplate concepts. The bookplate did not take only single importance they should contain some printmaking techniques that were also involved. In this time bookplate value has been enhancing the beauty of bookplate image as well as the function of bookplate also change according to ancient times.

Keywords: Bookplate, Woodcut, Mezzotint, Engraving, Drypoint, Serigraphy, Lithography, Linocuts, Ex-libris.

Introduction

The Bookplate term is a very old element, it has been put in the center of attention by thousands of artists and millions of bookplates have been produced. This trend gradually spread in all entire countries which are open the FISAE association has been established in almost every country in the world, competitions & exhibitions have been still organized. Here we focused on the history of the bookplate, at the beginning of its history when the bookplate was used to designate book ownership. History, function, and aesthetic sense have intertwined, the history of the book and the bookplate in a way they would seem inseparable. In ancient times each word had to be written by

hand with beautiful calligraphy, decorated with colorful paintings, then the whole was bonded in costly leather, wood, and precious stones. Only the prosperous family could own this book- kings, knights, and priests. Generally, the book is formed in a role that was played by papyrus scrolls or clay tablets.

The first bookplates featured coats of arms of the aristocracy who are the only people wealthy enough to have a library by the 19th century, books were common and book plate's designs became artistic talented illustrators such as Albert Durer, Edward Burne-Jones, Aubrey Beardsley, Walter crane or Eric gill designed bookplate. Bookplates often reflect the owner's interest and many artistic styles can be seen from the arts and crafts movement to the modernists, etching, woodcut, mezzotint, Engraving, Drypoint, Serigraphy, lithography, Linocuts have all been used to make bookplates. The composition is always simple decoration, is usually limited to the asymmetrical arrangement.

HISTORY OF BOOKPLATE

It is a very long tradition of bookplate function is belonging to books. The best example of the small hand-colored woodcut representing a shield of arms supported by an angel, which was pasted into books presented to the Carthusian monastery of Buxheim by Brother Hildebrand Brandenburg of Biberach about the year 1480. Many of the earliest bookplates from the 15th and 16th centuries are "armorial bookplates," depicting coats of arms since private book ownership at this time was the domain of the wealthy. At that time the inscription is integrated on the plate and the date fixed as a record gift, bearing a name. Author signs below the paper. The invention of the printing press and the reproducibility of the books. The art of ex-libris developed in the 16th century by demand and very plainly armorial,
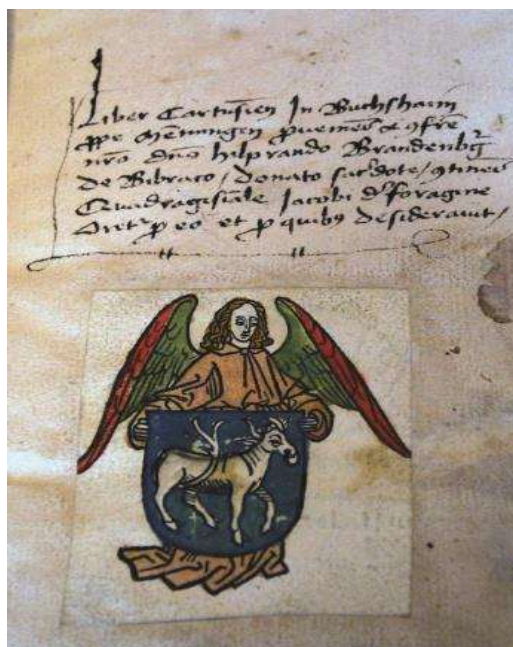
FUNCTIONS AND VALUES

These are function of bookplate which contain all the nuances of the artistic styles of the period, were designed by respected original print artists for most famous lawyers, writers, statesmen, scientists, doctors, and libraries. In the earlier plates, the crest is always in its proper place over a helmet and the helmet over the shield of arms. Bookplate to be seen in the much-decorated image with the almost rectangular shield prevailed in French bookplates, but soon after this, oval shields predominate when usually bearing the chief inscription. This time bookplate concept is only to followed for an ornamental frame and support being of the interior architectural order, making frequent use of fish scales and patterns for the decoration of a plain surface.

But crossing the era the motive of bookplate function has been changed time to time. Artists would be diverted for this meaning and expand to all kind of relate to bookplate concepts. The bookplate did not take only single importance they should contain some printmaking techniques that were also involved. Passing now into the sixteenth century, and still keeping to chronology as our main guide, we can turn at once to Albrecht Durer as a designer of ex libris, and we now move to safer ground, as we begin to find dates, and then soon names or monograms of engraving. In this time bookplate concept has been changed compared to the ancient period, they contain some points:

- ✝The size of postcards.
- ✝Bearing ownership name
- ✝Ownership of the volumes

Bookplate it is a significant communication medium. While it is set as the graphic of need. Which specific master-work has been designed from aesthetic anxiety? Art from human hands into the books, lets others feel its charming warmness. This art which has an older history has become interesting at present time because of its cultural[1], historical characteristics and has been used by artists and collectors as an important role in the bookplate art trend. Bookplate importance always reflects the name and character of the owner. Ex-libris is defined in the literature. Bookplate term is denoted small graphic original work of art that has been affixed to the inner cover of books by the book lovers featuring their names and pictures on a different subject as follows. It is introducing the owner of the book, glorify them and warn the borrower to bring back the book. Ex-libris is not an indicator of the book but rather of the owner of the book and also indicates the author's skills. The books have been protected with passion and love by their owners. The book owners have chosen to mark them with the need for protection and ownership. These signs are called ex-libris. From the past to present we have focused on all areas of the bookplate concept and the purpose of the bookplate. In an ex-libris (bookplate) consist of many graphic techniques, it is also an essential part of the different medium to have specific name mention on printing paper. The first list of symbols of techniques used in creating and printing ex-libris was adopted in 1958 at the Barcelona Congress of FISAE.

The main function must be followed by artist.

☐ †Unnecessary changes were avoided as they would render earlier references invalid and thus create confusion. No major corrections of inscriptions in existing collections should be necessary.

☐ †The list is limited to symbols for techniques used in printed ex-libris – i.e., abbreviations for non-printmaking techniques (drawing, pastel, etc.), or styles ('heraldic', 'calligraphic', etc.) were excluded. Due to modern printing techniques and concept presenting bookplates on publishedBook has been changed, people forgotten the real mean of bookplate, somewhere the purpose of creating bookplate suffer by this tendency. Today Bookplate Design Art became much more popular as an independent art form, several book plate Association has been created in all European countries and now spreading all over the world. Decade back many Chinese collectors adopted this form and regularly collecting beautiful Book plate designs from all over the world, due to this the artist became creating new ordered book plates. This concept is increasing day by day and new talented skilful printmakers getting new possibilities of doing prints. The competition of creating unique and different design by subject and by technique as well has been increased. Many designers adopted computer as tools for creating computer generated art. Doing manipulation and adding technical skill in work the bookplates became more vibrant and perfect presentation of any subject. In India the concept of bookplate is not much popular now but by globalization this art form can never be hide from younger generation and I am sure this tradition will become popular here also if it is introduced in Academic Courses in different Printmaking Institutes. At the time there are 10,000 collectors actively spread the bookplate trend in all over world as well as support for the artist skills. The main aim of this time the artist should commission somewhat extravagant ex-libris artists mainly for exchange purposes, rather than for the original aim of pasting them into books. Bookplate works with cultural and historical features within its 500- year history is an application. In the creation process of Bookplate, traditional printing techniques and continues its development process by taking technological developments into it. This technological as a result of developments, without changing the essence of bookplate by using the

computer world. Another method has been added to its production. Bookplate artists made in addition to traditional techniques, serigraphy, offset and computers they also use. When we look at the production of the Bookplate, artists of all ages they produced bookplates with the techniques of the period using their facilities. Bookplate art today's technology, while remaining loyal to the aesthetic values of the past. Artists who produce bookplate works in digital environment they also create works by using traditional printing techniques. This time produced in digital environment with the invention of photography and the development of technology. The function of the activities is to bring e bookplate lovers together and share, allowing the ex-libris exchange. In order to be better organized at the Hamburg congress (1966), an international FISAE International Federation of Ex-libris Amateurs and Associations was established with the decision taken. A bookplate that is designed and reproduced by the artist is special for the user and is a new value-added to the book. This category of work of art that is functional is a new activity in our society that is bookplate design, reproduced and applied on books. Art activities on bookplate have been increasing in the world and in our country and successful artists handle this topic. There are national and international organizations that organize these activities. These organizations are very important in advising the norms of activities and spreading their announcements

LITERATURE REVIEW

Basically, for my research the resources are books, art literature, magazine, attending exhibitions, meetings and interviews of artist and collectors. To attend different international Ex- libris meetings or congress, participation, visiting Artist studios and collecting essentials documents will become the key factor of this research. In the modern facility of email and internet, it is possible to interview with artist and collectors.

- John Gustav Delly. MICROSCOPICAL BOOKPLATE (EX-LIBRIS): 2015. Print. This book is Witten by John Gustav Delly to describe the resources, modern bookplates, microscopically bookplates (ex-libris). It is helped to study the historical background of bookplate subject matter and developments, with the pictures of bookplate illustrations and designs.

- Jules Heller. Printmaking Today. 2nd edition-a studio handbook. Holt, Rinehart, and Winston, Inc. 1972. Print. The writer has completed the information of printmaking techniques, with a brief introduction of all printmaking techniques such as conventional and modern methods. The books give the information about print workshops, equipment and materials

- Kumar, Sunil. Bhartiya chapachitra kala-Aadi se Aadhunik Kaal Tak. Delhi: Bhartiya kala prakshan, 2020. Print, this book gives information of printmaking from prehistoric times till the contemporary era. The author has given a detailed record of Indian printmaking activities, and the contribution of the various artist in the expansion of printmaking with some of the new techniques and processes invented by them.

- Robert Adam and Carol Robertson, Intaglio. (The Complete Safety-First System for creative printmaking): London, Thames and Hudson. 2007. Print. This book is a type of briefly introduction of printmaking techniques to carry out how intaglio printmaking developed, the history of the origins of intaglio,

and innovators and their techniques. Focus on planning and equipping a studio for intaglio printmaking.

- Edward Almack, Book-plates, Distributed http://www.pgdp.net, 2019. E-Book. This particular book is specially based on Bookplate having 175 pages and divided in several chapters based on chronological study of bookplate design started, having very interesting investigative historical matters from the beginning. This book helps me a lot to understand the development of bookplate art and its historic concept.

- Graphic Art in India since - 1850. New Delhi: Lalit kala Academy, 1985. Print. Data from this book helped in knowing the historical background of printmaking in India covering the description of the history and the gradual development of printmaking in different regions of India, from well before the invention of the printing press and movable type up to the beginning of the 20th century.

- Contemporary Indian Art- other realities edited by- Yashodhara Dalmia -Marg Publication 2002: Print. This volume provides a much-needed perspective on contemporary Indian art, offering a dynamic rather than a static way of approaching the subject. This help me to define the contemporary Indian art perspective and adopting new concept, market demand and taste of art lovers.

- Mota Miranda, Artur. Contemporary International Ex-libris Artists: 2016. Print- In this book the writer has collected the information of different countries bookplate artist those who are working in this and having contributions in this field. This book is helpful for collecting the contemporary bookplate print artist name belonging to Asian countries such as Japan, China, Turkey, Russia, India etc.

METHODOLOGY

I have follow some methodology according to my research topic where, research process will include descriptive and analytical research methodology to be undertaken because it consists of all the important features which are very appropriate for the process. They are restricted not only to fact finding but may often result in the formulation of important principles of knowledge and solution of significant problems concerning local, state, national and international issues. It will also help me in measurement, classification, analysis, comparison and interpretation. Data collection has following steps:

COLLECTION OF PRIMARY DATA:

In this I will obtain primary data either through observation, through survey or by direct communication with respondents through different sources of media or personal interviews. Attending Art Events related to my Research. Field work: the various field works which I should take as follows:

1. Visiting and attending Ex Libris Meetings and Congress during my Research.

2. Visit to the art galleries- where the concerned artists are putting up their show.

3. Visit to the exhibition, seminars and workshops

4. Visit to the libraries and art collection houses.

COLLECTION OF SECONDARY DATA:

Secondary data means data that are already available i.e. they refer to the data which have already been collected and analyzed by someone else. Like books, e-books, magazines, newspapers, research paper, catalogs etc.

CONCLUSION

The process and function of form production in bookplate withstand the two-dimensional language of form established by the artist as a signifier. One of it is the style and language of the artist. The second one is the symbolic representation of a person or institute referred by the artist. Therefore, it can be said that every bookplate has a double identity. While many bookplates from old and recent times represent particular people or institutions, at the same time they make it possible to read cultural, architectural, social, and political situations, events, and phenomena of the era that they had been made in. On the other hand, it is possible to find out the styles of historical and geographical similarities and differences within their multi-dimensional relations. Every bookplate can take place within the large symbol family due to its characters of meaning and representation even if its form fiction is either realistically, or abstractly, or symbolically tied to its signified object. Although symbolic expression has different trends of fiction, they mostly withstand to cultural, mythic and traditional essence. Since symbols are based on complicated, multi-meaning and ancient cultural inherit, they provide availability for narration. The bookplate now becomes the mediator between the person or institute that it represents and its artist. At the same time, it is a particular art field, distinguishing from other visual arts by its characters making symbolic expression and narrations are possible.

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The Roal of Acrylic Painting in Expressing Lust and Love

M. Karthi

Abstract

The artist works with brush and colors by sitting in front of the canvas is not the same as a digital artist who works with the monitor using the mouse by applying code and commands. The artist fails several times during the initial trials of creating the manual art. After numerous times of practice and effort, the artist succeeds in creating the manual art. Then, the artist somehow gains control over the art materials. Finally, the artist felt surprised by discovering that the acrylic medium of painting has no barrier and controls to give creative shape to the creative language. This paper elaborates on the professional career of an acrylic painting medium artist. The artist has used acrylic colors and canvas as a primary tool to explore the art as an instrument of love. The traditional paintings were mostly based on watercolors, line drawings, and the shapes filled with uniform shades of colors. When artists explored the possibilities, then it has been realized that the sky is the limit. This paper documents the thought process, creation, and exposition, and one can find elements of relationships, human anatomy, lust, and most importantly love. By experimenting with different postures, human figures become quite engrossing to observe. The sole subject of paintings is the peculiar human experiences. The art pieces are embracing the good as well as bad aspects of human experiences of bold of human life. This paper also accentuates the need for painting to create the immersion process that enables one to comprehend the abstractions of paintings and to make them captivating. The paper concludes with the premise of acrylic painting being more effective in expressing intense human emotions compared to digital painting.

Introduction

It starts with playing with a mouse, keyboard, pen tablet, software to design and new effects. With continues working and full efforts to overcome, the new tools are required with another platform of art and design, eventually, some design and paintings take shape for another level in a larger number of working again working. For completion of learning, it will take a lot of energy. After several times of practicing, the experience of the artist felt to an artist style which will be an unique style. It comes systematic experience, maturity, efforts, and control over the platform. It is learning by oneself through the digital way. Most of the experienced artists for the main reasons have successfully earned their unique "style" in this acrylic medium. The real artistic quality is a unique combination of elements of art and principles of design through which an artist bringing the shape to their creativity. This quality is reachable on digital platforms also. The art is not in the platform or tools, in fact, it is in the soul and mind, if there is a prevent to create a concept, it will be seen in any art platform of incompetence. Those with the artistic concept will decide the showcasing of the artist's ideas and content, do not worry much in the platform what which tools has been used.In this, the acrylic medium is more flexible for canvas. The most variety of applications and textures can be created much more easily on the canvas than on a digital platform. Creatively artistic experience in painting does not require the controlling use of painting materials or going beyond the limits of the acrylic painting. Flexibility can also lead to unlimited creative ideas through the work. In fact, acrylic medium gives the tremendous ideas of creation and attractiveness elegance than the

digital art techniques. It always indicates liberty, pliable, diversity, and gaining expertise. Here, I look after several acrylic medium artists who have admired abandon, happiness, interest, and conciseness in working with the acrylic medium. The acrylic medium can be projected in the international exhibitions and gallery presentations so that the worldwide art lovers, artists and critic people can enjoy it. They love human square - Human interpersonal, Family, Friendships,

Acquaintanceships, and Romantic relationships. My paintings portray the Human interpersonal relationships of men and women, the phycological emotions, and physical chemistry in round a clock. I use perfect asymmetrical and symmetrical forms like regular and irregular shapes of human anatomy to cover my human figures thereby symbolizing the strive for constant improvement and perfection of contemporary human love and lust. The painting presented here is very stylish and fresh acrylic color medium and has been using multi-size canvas board with different types of sequences and techniques. I am inspired by artists like Leonardo da Vinci, Andreas Vesalius, Rembrandt, Michelangelo, Van Gogh, Dumile Feni (South African), NS Manoharan, Dr.J.Gopal Jayaraman, Ka. Baskar and so many others. II. Related Works

"I believe in God. I pray to Nature. Consciousness is my religion, which I am filled with "

The concept presented here is a experienced imagery language that interprets the balance between spiritual and physical existence. This is exactly the harmony to which I aspire in all my paintings. In our present society, there is a constant endeavor to accommodate our differences while respecting with in our particular relations. During 1994, a large number of paintings has commenced based on the centering on human interpersonal relationships. "How can interactive paintings create a common platform between together while respecting their individual identity?" is well presented in this paper, here creating a sequence of interactive paintings, I regulate the few factors that are much important for connecting people of many other areas - mutual vulnerability, anonymity, and the leveling of power dynamics through my paintings. It is my responsibility as an artist to raise awareness about emotions, respectfulness, interpersonal relationships using acrylic painting and drawing. The inspiration of this work is beauty of human anatomy, human love and lust amaze. Anonymity involves having people reveal only single aspects of their body to avoid pigeonholing and encourage them to focus on feeling the humanistic presence of each other. The beauty of love and lust in the human world God has given to us admirable creations. We must live with love harmony with lust and find interpersonal interaction in our lives and the importance of individuality. The concept of this art is to "Join us to save human relations".

Proposed Methodology

1. The Beauty of human interpersonal relationships will be painted on the experienced imagery language.
2. Interview will be conducted with the respective art friends.
3. Discussion will be conducted with the physiologist.
4. Art works will be displayed in galleries and online shows.By using those acrylic paintings, the importance of human personal life and human race can be clearly explained.

278

5. By displaying my paintings in the galleries and online shows, people will be reminded of their personal relations to gain a better understanding of the importance between together while respecting their individual identity. In this, I would bring awareness of human internal life and their human values that is in tune with love and lust.

Artistic Influence

The work has been inspired by the following well-known artists who are specialized in anatomical paintings in different medium of art.

- Leonardo da Vinci -(Figure: 1)

- Rembrandt -(Figure :2)

- Michelangelo-(Figure :3)

- Dumile Feni -(Figure :4)

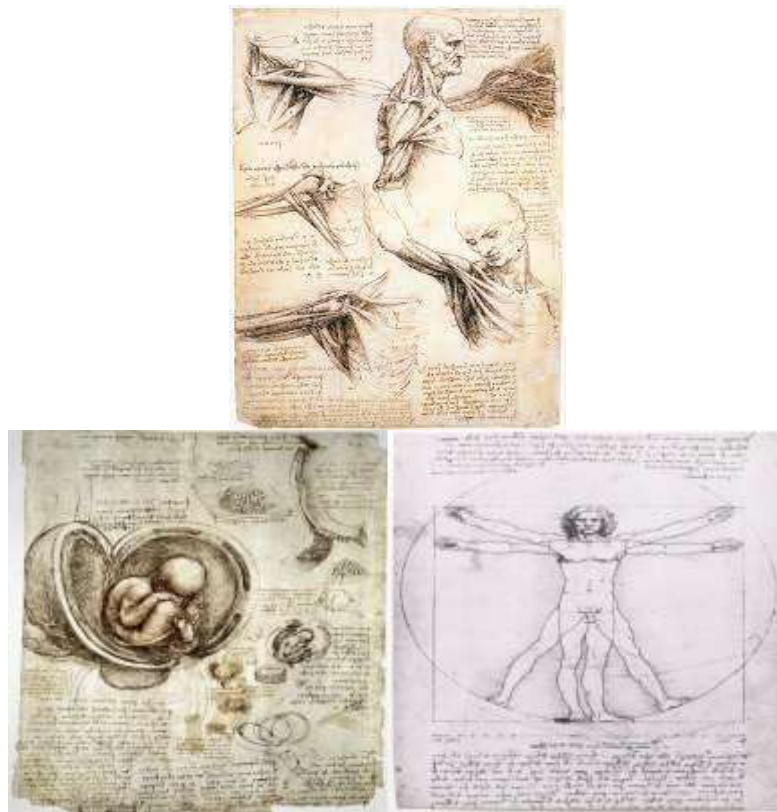- D.J. Gopal Jayaraman-(Figure :5)

Figure 1: Leonardo da Vinci art works - https://www.britannica.com/biography/Leonardo-da- Vinci/Anatomical-studies-and-drawings.

Leonardo's early anatomical studies dealt chiefly with the skeleton and muscles; yet

even at the outset, Leonardo combined anatomical with physiological research. From observing the static structure of the body, Leonardo proceeded to study the role of individual parts of the body in mechanical activity. This led him finally to the study of the internal organs; among them, he probed most deeply into the brain, heart, and lungs as the "motors" of the senses and life. His findings from these studies were recorded in the famous anatomical drawings, which are among the most significant achievements of Renaissance science. The drawings are based on a connection between natural and abstract representation; he represented parts of the body in transparent layers that afford an "insight" into the organ by using sections in perspective, reproducing muscles as "strings," indicating hidden parts by dotted lines, and devising a hatching system.

Figure 2: Rembrandt Paintings - https://www.britannica.com/biography/Rembrandt-van-Rijn/The-Leiden- period-1625-31

Rembrandt, Dutch Baroque painter, and printmaker is one of the greatest storytellers in the history of art, possessing an exceptional ability to render people in their various moods and dramatic guises. Rembrandt is also known as a painter of light and shade and as an artist who favored an uncompromising realism that would lead some critics to claim that he preferred ugliness to beauty.

Early in his career and for some time, Rembrandt painted mainly portraits. Although he continued to paint—and etch and, occasionally, draw—portraits throughout his career, he did so less frequently over time. Roughly one-tenth of his painted and etched oeuvre consists of studies of his own face as well as more formal self-portraits, a fact that has led to much speculation.

Figure 3: Michelangelo, Painting –

https://www.britannica.com/biography/Michelangelo Detail of a ceiling fresco by Michelangelo, 1508–12; in the Sistine Chapel, Vatican City.

Michelangelo, Italian Renaissance sculptor, painter, architect, and poet who exerted an unparalleled influence on the development of Western art.

Michelangelo was considered the greatest living artist in his lifetime, and ever since then, he has been held to be one of the greatest artists of all time. A number of his works in painting,

sculpture, and architecture rank among the most famous in existence. Although the frescoes on the ceiling of the Sistine Chapel (Vatican; see below) are probably the best known of his works, the artist thoughtof himself primarily as a sculptor. His practice of several arts, however, was not unusual in his time, when all of them were thought of as based on design or drawing. Michelangelo worked in marble sculpture all his life and in the other arts only during certain periods. The high regard for the Sistine ceiling is partly a reflection of the greater attention paid to painting in the 20th centuryand partly, too, because many of the artist's works in other media remain unfinished.

Figure 4: Dumile Fenni, Drawings - https://www.grosvenorgallery.com/exhibitions/30-frieze-new- york-2017-dumile-struggle-and-repression/works/

Dumile Fenni was also an exceptionally gifted sculptor, skill that is clearly expressed in his art. Though executed entirely in a linear fashion, many of his drawings have a profound sculptural quality. The Study for the portrait of Albert Luthuli is an excellent example of this. It does not attempt to depict the final three-dimensional sculpture; instead, the drawing itself has intrinsic attributes to sculpture. Dumile Fenni succeeded in imbuing his work with feelings of deep sympathy and humanity.

Figure 5: Dr. Gopal Jayaraman, Paintings -
https://gopalj.com/paintings/nggallery/page/1

Gopal J's work is imbued with an ever-present sense of spirituality and intangibility which often cannot be seen but only felt through belief. The intricacy of his designs, both Indian and African, in still a sense of sustained adoration and religiosity. Painted in gold and silver, such designs adorn the surface reminding one of religious paintings and architectural design from the world's oldest cultures. At the same time, they give a sense of playfulness to his surface, which is often marked by bold colorful strokes of thick acrylic paint or washes of transparent color which flood his scenes, sometimes in quiet contemplation or in passionate supplication. Gopal J is deceptively skilful in managing to control his busy compositions be they in full color or rendered in minute detailed black and white ink drawings. His ability to control the lighter ethereal planes, the lower darker realms and middle planes of color and human activity add depth to his worlds which are never straightforwardly separated but are always interwoven and interconnected. One is aware of the harmony between various subjects and elements – from gods to humans to animals – and between line, paint, space and material.

Briefing About Artist

Mr. Karthi has earned master's degree from Annamalai University and bachelor's degree from Government College of Arts and Crafts (the first college of Arts and Crafts in India), Tamil Nādu, India. His research topic was "The Role of Acrylic Painting in Expressing Lust and Love" in subject Drawing and Painting with Acrylic medium. Worked in Reliance Media Works (Big

Animation PVT Ltd.) and Ocher Studios as 3DProject Texturing Head and also Head of Design,

Pune and Chennai. He had been faculty in Crescent Institute of Technology (University), Chennai and taught Architecture Designs and Digital Arts courses. Presently he is Assistant Lecturer, ISBAT University, Kampala, Uganda (East Africa), where he is teaching Art and Animation Design.

My Creations

I have been impressed by the works of the above-mentioned artists, but my paintings are differing from these artists. I am a contemporary-acrylic artist because contemporary ideas are attracted to everyone. My creations of all art works are very easy and dignified. My artwork will attract to people of all ages of maturity. This would be contemporaneous.

I get stimulated when the viewers are excited. I have used this acrylic medium to reveal my tenderness by emphasizing light color and mixed color tones and weaving extraordinary effects into my imagination. Color mixing and scattering can sometimes create accidental, unique and wonderful effects, which make sme enjoy the moment. All my works have received my full attention and commitment. The country India will be a pleasant country forever. I am extending the contemporary -acrylic paintings with sunshine and shadows.

My Art Works

Here I am sharing some of my contemporary-acrylic paintings that I have created to express my thoughts about the love and lust.

Figure 6: M.Karthi Mystic binding 2020, Acrylic on Canvas.

Figure 7: M.Karthi Ecstatic Union 2020, Acrylic on Canvas

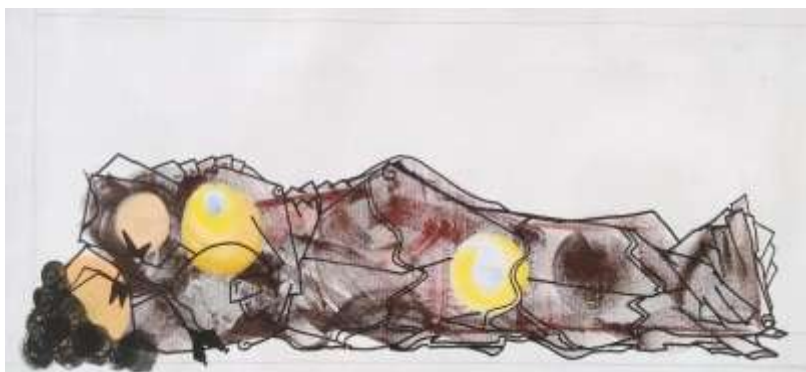*Figure 8: M.Karthi, Husband & Wife 2020, Acrylic on Canvas*

Figure 9: M.Karthi, Husband & Wife 2020, Acrylic on Canvas

As Pablo Picasso once said, "sex and art are the same thing." If you have studied art history, you have certainly seen the fair share of nudes. *(Figure: 6,7,8, & 9) Mystic binding, Ecstatic Union and Husband & Wife* - Both husband and wife are shown semi-naked and in the appearance of lust communion, but me has chosen to cloth the figures in elements of sarees, and exposes her curly hair, wedding locket and one pair of chests to the viewer, creating a scene of exhilaration for the onlooker, rather than pure lust and love.

In the above paintings, two figures—a male and a female (Husband and Wife) — are sprawled, entangled, on a bed in the foreground. They are naked and intimate, although not shown engaged in the act of lovemaking, the mood is instead contemplative and calm, and while the man stares impassively down at the female, she is distracted and stares into space. This scene appears realistic,

but on closer examination he two central characters are shown in repeat, and in other positions, across the painting, including in a circle propped up with drawings shown some of their postures.

The sensuality of this painting lies not just in the partially seen couple in the bed, but also in the thickly applied acrylic paint itself. The marks are voluptuous and smeary, suggestive of bodily fluids and flesh, the dominant yellow-black color palette in the

284

middle ground and orange, white, brown colors of the lovers melding with the earthy tones of the lust and love.

Conclusion

Acrylic painting, painting executed in the medium of synthetic acrylic resins. Acrylics dry rapidly, serve as a vehicle for any kind of pigment, and can give both the transparent brilliance of watercolor and the density of oil paint. They are considered to be less affected by heat and other destructive forces than is oil paint. They found favor among artists who were concerned about the health risks posed by the handling of oil paints and the inhalation of fumes associated with them. This collaborative research work will be useful research area into the general properties of acrylic medium paints and investigations into the effects of treatments on canvas. Dry treatments techniques may also result in undesired changes such as burnishing or abrasion of paint. In some cases, wet-surface medium remains the most effective option for the removal of unwanted area and appropriate for the conservation of modern and contemporary painted surfaces on canvas.

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Exploring the Art of Varanasi Handicraft with reference to Interior Design and Decoration

Shradhha Jadhav & Rakhi Charwad

Abstract:

Varanasi is popular for its tradition and culture in all over the world. It is one of the oldest city in India famous for handicraft and art. Varanasi has a rich cultural heritage ranging from handicraft, art, temples, music, food, unique Ghats, festivals, sarees and many more. Space planning and Interior Design is the essential part of any type of architecture. While planning the design it is incomplete without the application of arts and crafts. Interior design and planning are incomplete without the use of arts and crafts. A new age in interior design began with a shift in design concepts from complicated to meaningfully basic yet aesthetic ones, known as arts and crafts design. India has a rich history and a diverse range of traditional arts and crafts that continue to form our country's unique socio-cultural style. India has a wide collection of artisanal talents that have been passed down from generation to generation. They give a significant link to the past as well as a strong feeling of identity when used in architecture and interior design. There is a wide variety of crafts accessible all across India, with Varanasi being a significant hub of arts and designs. It produces carpet weaving, wooden toys, ivory work, perfumes, exquisite brass and copperware, and a variety of handicrafts used in interior design. The study highlights the function and significance of Varanasi handicrafts in the planning and design of interior spaces to generate distinct ambiances. It also attempts to educate people about preserving Varanasi's traditional art and craft.

Keywords: Handicraft, Interior Design, Aesthetics, Ambience, Art

Objectives of research:

1. To study the present socio-economic status of Varanasi Handicrafts.

2. To Explore Art of Varanasi Handicraft with reference to Interior Design and Decoration.

3. To investigate the aesthetic impact of Varanasi handicraft in interior design and decorating in relation to décor.

Introduction:

India is the famous country for its culture and tradition in the world. The cities like Varanasi made India different from other countries. Varanasi is the land of culture, tradition, heritage, art, craft, silk, music, festivals and many more. It is the oldest city in the world. A land of Varanasi (Kashi) has been the ultimate pilgrimage spot for Hindus for ages. Varanasi has, since times immemorial, been hailed as a leading center for some of the finest Indian handicrafts. Besides the famous Banaras Sari, brassware, copperware, ivory work, glass bangles, wood, stone, and clay toys, and exquisite gold jewelry are some of the other crafts Varanasi city is famous for. Among the other shopping attractions of Varanasi and surrounding areas are the Bhadohi Carpets and musical instruments. These all the arts and crafts are highly influenced by the tradition, culture and the atmosphere of Varanasi. Aesthetic and beauty of art is highly influenced by the culture of Varanasi. Impact of traditional and cultural atmosphere

can be seen in art and craft of Varanasi. It has influenced the design market of Nation. Here we can see the transition of craft from one generation to next generation.

The role of Varanasi handicrafts in Interiors:

Varanasi, a city in its own right, is a synthesis of various cultures, religions, art, and literature on a single piece of land. It combines life within itself. And life moves at a breakneck pace; aside from the city's numerous temples, another major draw is its art. Varanasi's arts and crafts are as old as the city itself, with some of them attracting visitors from all over the world for centuries. Each piece of art tells a different storey about a journey. And Varanasi's eccentric crafts never fail to catch the eye. As a result, Varanasi Craft is a unique feature in space planning.

The making of handicrafts often brings enlightenment to our social life. With the change of time many traditions and culture slowly fade out from our view which we do not realize.

Toys and Wooden Handicrafts:

Wooden handicrafts are playing an active role in Interior Design and Decoration. Wooden Decorative Items are the first choice of interior decorators as they add a new dimension of beauty and elegance in the decoration of residential or commercial projects.

Fig.1 Toys of Varanasi

Zardozi Badge making :

Fig. 2 *Zardozi Badge making*

Clay and terracotta work:

These clay cups can be found throughout India. However, the works' making and creation can be seen in Bhatti Village, near Varanasi. These clay utensils, pots, flower vases, cups, and vessels are made over a sniping base and the clay is molded with hands before drying in the sun and being baked later. However, the clay art does not stop with the utensils. Families here are also involved in the creation of clay idols of various gods and deities.

These idols are sold all year and are worshipped in ordinary households, shops, and places because they are easily accessible, affordable, beautiful, and biodegradable.

Fig.3 Woman rtisan Making Kulhad   *Varanasi Stone Craft*

Gulabi Meenkari Artisan :

The works created here are not only exceptionally delicate, but also extremely valuable. Meenakari is made up of two words: Meena, which means colorful stone, and Kari, which means artwork. By moulding the metal into eye-catching pieces of art, the artist introduces beautiful ornamental designs. The lustrous colour and intricate hand painted floral patterns on it, however, set it apart. These colors are the result of indigenous artistic and scientific treatments. They are extractions of precious minerals,

288

stones, and metals. The pink color, in particular, is made from gold using an oriental technique that involves mixing it with precious stones.

Fig.4 Meenakari work

Banaras Metal repousse:

This metal craft field produces a wide range of items. Malleable precious sheet metals such as gold, silver, brass, or copper are shaped and then covered with a layer of liquid Lac on the reserve side. When the Lac is in place, the metal sheets are hammered and chiseled over it, bulging the design in the foreground. Platters, jugs, betel boxes, and a variety of other articles decorated with this endemic fretwork captivate everyone.

Fig.5 Artisan Working on Metal Repose at Kashipura

This field of metal craft produces a wide range of items. Malleable precious sheet metals such as gold, silver, brass, or copper are shaped and then covered with a layer of liquid lac on the reserve side. When the Lac is in place, the metal sheets are

289

hammered and chiseled over it, bulging the design on the front. Platters, jugs, betel boxes, and a variety of other items decorated with this endemic fretwork captivate everyone.

Ghazipur wall hangings:

Ghazipur wall hangings are interior decor items that are handcrafted in the small city of Ghazipur in Uttar Pradesh. These traditional handloom products are woven by skilled craftspeople using: blend of different colors. They combine different yarns including jute and cotton tc ensure not only strength but also an unusual unique texture. The use of differing textures also forms: part of the presentation of the patterning and design. These Ghazipur wall decorative hangings are woven on the handloom and their intricate patterning, colors and designs have wide appeal. A large range of designs bears testimony to the skill of the weavers from representation of figures of Hindu gods and goddesses to intricate and detailed landscape arts with patterns of houses, lawns, forests, interiors, birds and animals.

Black pottery:

Nizamabad's black clay pottery, found in the Azamgarh district of Uttar Pradesh, India, is distinguished by its dark shiny body and engraved silver patterns.

The Black pottery is a collection of unique pots and containers produced with great skill. This art is produced from local dirt from the local area and is made near Nizamabad in the Azamgarh district. The pots are formed into various forms and designs before being baked with rice husk, which gives them their distinctive black color. The pots are occasionally embellished with silver-colored engraving and warmed multiple times to get the desired quality. It has been admired for ages for its unique production process and magnificent design.

Fig 6 Black pottery

Bhadoi Carpet weaving:

A prominent woven carpet is the hand-knotted carpet. This type of carpet is manufactured on a vertical wooden loom. Thick cotton and woolen yarns are used in the warp ends while wool is used in the width direction. These looms are equipped with a double layer of warp ends separator rods and platforms. Designs depicting flowers, animals, gardens, trees and trellises are used in various hues and ways to liven

up these floor coverings. The production process commences with the selection of woolen yarns which are generally bought from domestic and international circuits.

Fig.8 Bhadoi Carpets

Zari installation in interior Designed by Aditi Sharma in Varanasi for the brand Tilfi :

Fig.9 Zari Installation in Interiors

Varanasi Silk weaving:

Varanasi silk sarees are popular everywhere. Varanasi saris are adorned with intricate designs and zari embellishments making it popular during traditional functions and weddings. Earlier, the embroidery on sarees were often done with threads of pure gold.

Fig.10 Varanasi silk

Toys making:

Uttar Pradesh's Varanasi and Mirzapur are well-known for its hardwood lacquerware and wooden toys. The inherent veins of the wood are used to create designs. These toys have no joints and are appealing and safe playthings for youngsters. The artisans here claim to be members of the Kunder Kharadi Samaj. This skill is important in the artists' life because when a kid is born, a new lathe is added to the family's belongings. In fact, when a marriage is being planned, the boy's family ensures that the bride-to-be gets acquainted with the lathe. Varanasi, Uttar Pradesh, was formerly India's greatest toy manufacturing centre. It is an old craft in which wooden toys are created. Sets of birds, animals, musicians and dance ensembles are also available packed in boxes. These toys are being used to decorate in Interiors.

Fig.10 Toys

Ghazipur wall hangings:

Ghazipur wall hangings are handcrafted interior décor pieces made in the tiny city of Ghazipur in Uttar Pradesh. These traditional handloom items are weaved by experienced artisans utilizing a color mix. They use a variety of yarns, including jute and cotton, to provide not just strength but also a distinct texture. The usage of different textures is also a component of the patterning and design presentation. These Ghazipur wall ornamental hangings are handwoven and have a wide appeal due to their complex patterning, colours, and designs. A large range of designs bears testimony to the skill of the weavers from representation of figures of Hindu gods and goddesses to intricate and detailed landscape arts with patterns of houses, lawns, forests, interiors, birds and animals.

Fig.10 Varanasi wall hangings

Conclusion:

This paper focuses on benefits of Varanasi handicrafts to form good environment in Interiors, to enrich design skills along with promoting the culture of Varanasi.

Designers are preserving emotions, memories, beauty and creativity through the application of Varanasi handicraft in Interior Design and Decoration.

Varanasi handicraft is one of the popular trend in Interior Design and Decoration.

With passing time we are moving to the modern era. Here everything is digitized. Though we become advanced, still there is some connection with our tradition which always remain in trend through handicraft of Varanasi.

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