

THE RANGE OF CREATIVE EXPLORATION AND TECHNICAL EXPERIMENTATION IN PRINTMAKING PRACTICES AND IMPORTANCE OF ENVIRONMENTAL CONSERVATION

Pranjit Sarma

Printmaker M.V.A in Graphic Art, (Printmaking) From Department of Visual Arts, Bangalore University, 2018 Assistant Professor, School of Design Presidency University, Bangalore.

ABSTRACT

The research paper tried to address the various creative explorations and technical experimentations in contemporary printmaking practice. The chronological development of printmaking techniques and eco-friendly approach has been discussed throughout this paper. Especially, the paper has focused to illustrate **the** olden eastern block prints and their fundamental purposes. The traditional Indian relief printmaking practice and no-toxic technique of printmaking have also been mentioned in this Paper. After analyzing the western non-toxic printing exploration, invention and practice, the research topic has finally arrived at the conclusion- “The importance of such printmaking practice plays a very major role in productive outcomes in the field of contemporary printmaking Art”.

KEY CONTEXT

- Origin of Block Printing and versatile approaches of work.
- Diversity in traditional wood cut printing culture of India in different decades
- Invention of eco- friendly material, experimentation in terms of printmaking practice.
- Importance of non-toxic printmaking community in India and sustainable production of prints.

INTRODUCTION

Printmaking is a significant perspective of visual arts through which we can not only produce various creative pieces but also can communicate innovatively in the present world. Because of its versatility, the possibility of technical experimentation becomes wider. Hence, the ground of conceptual exploration seems to be multi-dimensional.

Universally, the experimentations behind any innovative practice make a massive impact in terms of quality outcomes and productivity. The other technical and circumstantial aspects also turn out to be the reason for their universal language. However, the language that emerges does not remain stable all the time. That is why the identity of an innovative piece is always in the process of progression.

Printmaking, with its various technical aspects, is a prominent medium with multi-dimensional soil of creative cultivation. It provides extensive scope to re-evaluate the collective ideas. As a result the final impressions always remain a matter of curiosity for the viewers also due to the diverse mysterious truths left behind by the technical aspects of it. Eventually, the entire medium creates a wider range of creative exploration.

The most remarkable aspects of printmaking are related to the environment. The importance of an eco-friendly environment should be the fundamental concern for printmakers to continue

their healthy creative practices. As there are a lot of toxic processes due to the numerous techniques and these harm the whole eco-system drastically. Here, the importance of the environmental conservation of printmaking practice is going to stand in the global context. Throughout the paper, I would like to address the large scale of technical experimentation of printmaking and the importance of environmental conservation in contemporary Art. More specifically, I am going to discuss the eco-friendly journey of a few printmakers from India and the USA and both their traditional and new media approach of printmaking practices along with a specific brief of nontoxic community space of printmaking in India. Then I would like to describe the innovation of nontoxic techniques and the materials in the western world.

THE HISTORICAL GLIMPSE OF RELIEF PRINTING AND THE HISTORY CONSIDERED IT AS AN EARLIEST ECO- FRIENDLY TRADITIONAL TECHNIQUES OF PRINTMAKING. (A DESCRIPTION OF EARLY WOODCUTS IN THE EAST)

Relief printmaking was a way for communication that originated from the prehistoric period. The pre-historic people used specific symbols and images to share the information among their community. The engraved and scratched lines over the wall surface filled with earth colors that decorated the walls of caves were certainly a precursor to printmaking. The engraved and carved images were significant forms of human expression on the wall of the cave. In 4000BC the first evidence of the relief impressions found in the Sumerians civilization was considered as a biodegradable process of creative expression.



Plate-1, Diamond Sutra Scroll, (image collected from web resource)

In 868 AD “Diamond Sutra Scroll” was the earliest block print printed by Wang Chieh. This complex figurative image with the text was discovered by a Taoist priest when he opened a sealed cave in eastern Turkestan in 1900. Because of its elongated composition, the print was predicted to be carved from one single block. The complex and sophisticated imagery in the “Diamond Sutra” suggests that the Chinese had a much earlier history of eco-friendly printmaking from woodblocks onto paper and textile. Most of the inks were made from natural ingredients. The uses of printed inks and the wooden surface of the printing practitioners were the primary witness of their environmental concerns. Considerably, the conservation of various

printed impressions of the inscriptions like “Diamond Sutra” was constructed as an ideology about being responsible for our eco-system. The printed complex block books with earth color plates in the seventeenth century including two “how-to” manuals-the Ten Bamboo hall paintings book, a collection of exercises in drawing birds, fruits, and flowers, and the Mustard seed garden-for artists in need of instruction and inspiration. These books were later brought to Japan, where they influenced the development of the Ukiyo-e prints.

THE TRADITIONAL PRACTICE OF WOOD-CUT AND ENGRAVING IN INDIA AND THE GLOBAL IMPACT IN THE CONTEMPORARY WORLD OF PRINTMAKING. (THE ORIGIN OF SPECIFIC EXPERIMENTATION WITH THE MATERIALS AND THE PRINTING SURFACE)

Woodcut is one of the most widely known and used forms of relief print. Although historically it started from the eastern world, presently it has extended across the world. Because of its larger possibility of experimentation, printmakers often preferred to experiment with the materials and the surface of their works. Mostly, the final impressions have brought an exceptional results to the viewers which created a lot of queries to know about the relationship between the creators and their process of creations.

After emphasizing upon the western history of printmaking, we could not let go of the importance of traditional aspects of woodcut printing. Particularly, India has a great history of wood-cut and engraving printmaking during the second decade of the twentieth century. And after independence, it has developed with multi-dimensional perceptions. For the first time, Ramendranath Chokravarty became the witness of relief explorer who has experimented with color- woodcut prints in Japanese multi-coloured Ukiyo-e printing technique in 1925. During that period the history of Indian traditional wood-cut printmaking was made by many other artists like Nandalal Bose, Mukul Dey, Ramkinkar Baij, Binodh Bihari Mukharji, Sanat kar, etc. Sanat Kar was also another one who had experimented the wood- Intaglio prints in India for the first time.



Plate- 2, right side- wood-cut print of Haren Das left side- Wood-intaglio print of Sanat Kar
(images collected from the web resource)

After going through the previous historical references, we have found remarkable contribution of Indian printmaking in the context of both commercial and conceptual demands. Apart from all legendary printmakers, we could not leave the input of traditional wood-cut printing given

by Haren Das in the early 20th century. Haren das was trained by Ramendranath Chakraborty and became a master in achromatic and multi-coloured woodcut and engraving. He was also significantly influenced by Japanese Ukiyo-e prints. However, mostly his subject matters were based on Indian typical rural life. Many others were inspired by his journey decades after decades.

In the current era of contemporary printmaking, the wood-cut printmakers and engravers have been exploring the process with several technical types of equipment in an extensive manner. In the course of technical developments, the accessibility of materials has made a major impact on their works. However, in the case of some printmakers, the traditional test of the process has not disappeared and the significant results of the impressions were connected to its origin.

TWO REMARKABLE WOOD-CUT EXPLORERS IN INDIA AND THEIR PRACTICE WITH BOTH TRADITIONAL AND EXPERIMENTAL MANNER IN THE MILLENNIUM ERA

Here I would like to present Attri Chetan, a traditional wood-cut practicing printmaker from Rishikesh, India. He has been practicing wood-cut for the last 10 years. During this period he has walked around both technical and visual ground of the medium, broken the pre-constructed trail of wood- engraving, and cutting. And his body of creations represented a unique visual narration that hailed from his native origin. He has been inspired by Haren Das in his early academic career. Therefore, his use of pictorial elements and physical engagements were very direct and traditionally prominent. Although he has frequently used the natural wooden block for his creative productions during the initial phase of his career, later he started working on MDF, a compressed and ply wooden surface due to the less convenience of origin wood block in the current urban market.



Plate-3, Natural wooden matrix, (images collected by Attri Chetan)

A few of his noteworthy works done from the natural wooden block were Business Holders, The Bird's Eye, After Rain, The Sealed Door etc. After having a tour through these pieces, we could make out the test of the traditional approach of wood-cut as a most defined medium of his visual execution. The layers of colours illustrate the ideal substance as a metaphor which he experienced through the different natural surroundings. In his later experimental exploration of the surface bring a massive amount of transformations in terms of his visual narration. However, Chetan appeals that his typical traditional processes of creations generally deal with the less toxic and Environmental- friendly atmosphere as far as his fundamental concern.

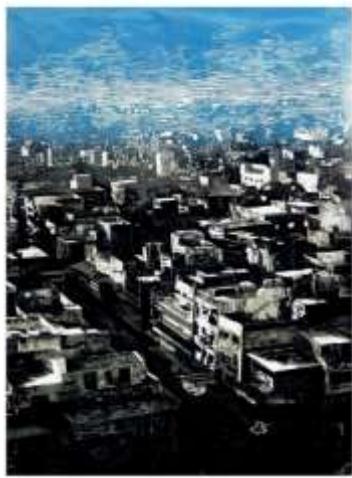


Plate-4, right side- Bird's eye wood-cut print left side- Business Holders, woodcut prints
(images collected by Attri Chetan)

After considering Attri Chetan as a major ideal for traditional wood-cut printing, we have another prominent printmaker- Arvind Sharma who belongs to Haryana, India. He has experimented with the complete wood-cut technique, substantially. His body of multi-coloured woodcut works has represented an indigenous mode of creation and also reflected the vastness of experimental possibilities. Moreover, he has investigated the unexplored possibilities while he was in the process. And the matrices often guided him to create the final compositions which were completely unplanned. Hence the results of final impressions leave plenty of mystery for both viewers and himself. Mostly he experimented with the paper surface that provided an exclusive essence regarding his pictorial depictions. From the conceptual point of view, his works have illustrated the narration of his spontaneous thoughts. Due to the process of creative contractions, the visual narratives have been notably modified based on Sharma's direct physical contact with the surface.



Plate-5, right side- Mesmerizing Dream wood-cut print left side- Missing, wood-cut print
(images collected by Arvind Sharma)

A few of his works were highly impressive, where one could find a particular visual language including the evidence of wider experimental explorations on both matrix and the surface of impression. His visual narration is majorly based on the divinity of several feminine aspects in

our society. He was curious to execute his spontaneous thoughts, which facilitated him to create each piece with peculiar quintessence.

ESTABLISHMENT AND DEVELOPMENT OF NON-TOXIC PRINTMAKING STUDIO IN INDIA FOR THE FIRST TIME IN 1991. (ACCORDING TO THE PRIMARY SOURCES OF INFORMATION)

Generally, printmaking has been considered a toxic creative medium because of the use of various chemicals as described in the introduction. All these chemical processes have affected our health as well as our environment drastically. Hence, the importance of nontoxic-printmaking practice has been placed as a constructive solution among the printmaking community across the world. In India, where we have seen that most of the community studios continued the traditional chemical-based printmaking process, Jawahar Kala Kendra, a printmaking studio located in Jaipur India became the first non-toxic printmaking community studio established in 1991 (contraction- 1986-1991). During the initial few years, the studio started with less toxic chemicals and gradually developed non-toxic processes by conducting several interactive workshops and exhibitions. The workshops were led by several Masters like Anant Nikam, Kavita Nayar, Kavita Saha, Dattatreya Apte, Anupam Sud, and many others.



Plate-6, Micro metal engraver – Jawahar Kala Kendra, (image collected by Cendra Prakash Jain)

As per the primary pieces of information collected by the printmaker Chandra Prakash Jain, for the intaglio process, sugar liquid is applied as an acid registrant protector on the metal surface. And sugar specks of dust are used as a cloud of resin dust and through the process of melting these are fixed on the surface. In terms of the etching process, printmakers prefer the use of copper sulfate solution.

The particular ratios of the solution are given below-

1. For line bit the ratio is- 100 gm Copper sulfate with 100grm salt (Sodium chloride) mixed with one-liter hot water.

2. For the aqua etching process the ratio is- 75gm copper sulfate with 50 gm sodium chloride mixed with one liter of hot water.

These kind of activities continued by Jawahar Kala Kendra have always provided awareness about eco-friendly creative practices. As a key source of inspiration, the other community studios also started environmentally-friendly printmaking practices along with other significant experimentations.

THE INNOVATION AND DEVELOPMENTS OF NON-TOXIC PRINTMAKING PROCESSES BECAME A SIGNIFICANT ASPECT OF ENVIRONMENTAL CONSERVATION IN WESTERN WORLD. (A BRIEF DESCRIPTION ABOUT AQUATINT PROCESS)

Historically, aquatint is known as one of the remarkable processes in printmaking. Across the world, printmakers have been using this process since the late 14th century. The percentage of toxicity is considered higher than any other medium of printmaking. Hence a method was developed by Keith Howard with the use of acrylic inks and airbrush types of equipment.



Plate-7, right side- Aquatint spray resist(non-toxic and left side- Non-Toxic ink
(Images collected by University of Saskatchewan)

In 1994 he collaborated with Lydia Anastasevicz, a traditional aquatint printmaker and they tested thoroughly the new type of aquatint at the Edinburgh Printmakers workshop. Lydia successfully produced the first-ever non-toxic aquatint process by using this new invention. And she was extremely satisfied with the result. Later, the speedball was capable of greater subtlety than traditional rosin-based aquatint due to its semi-permeable nature. In this innovation, the result was much smoother, with total effects and gradations than were possible with the resin particles. Eventually, many other acrylic solutions such as the Badger aquatint solution were developed by Keith Howard and Lascaux solution or ZAcryl's hard ground, also worked as a spray aquatint.



Plate-8, Non-Toxic Pigments and Ink Encre Tinta,
(Images collected by the University of Saskatchewan)

THE TWO CONTEMPORARY WESTERN PRINTMAKER AND THEIR ECO-FRIENDLY INTERDISCIPRINARY PRACTICES OF PRINTMAKING

As per the above description, we can predict that the western printmaking scenario has widely explored incorporating drawings and other interdisciplinary approaches of visual art. Several printmakers have experimented with different printmaking processes, where the non-toxic aspects of practice have climbed expansive heights in terms of importance. Along with the non-toxic process, the developments of acrylic-based and water-based ink played a vital role in provisions of the multiple productions of prints. For example, the Akua ink was developed by Susan Rostow and purchased by Speedball a few years ago. The printmaker Marchelo Vera who has also been associated with the research of that ink at Rochester Institute of Technology, has been using it since 2002.



Plate- 9, Series of work- Frequencies- Thoreyebisu and Helixiarious
(Non-toxic screen printing, drawings and monotype)
(Images collected by Marchelo Vera)

He has also studied under Keith Howard during his academic career in Non-toxic printmaking for six years. Along with the biodegradable practice of printmaking he has brought interdisciplinary possibilities with printmaking. His Series of work- "Frequencies (Global

synthesis)"—was the evidence of a larger exploration of printmaking, he used the drawings, monotype with screen printing. The outcomes of the series have truly inspired the viewers for the interpretation in the contemporary field. Apart from this series, another phenomenal creation of his was the series of print—“Table Talk”, where he executed the digital prints on the textile surfaces accumulated with other materials like colorful nails and techniques like sewing to join the small pieces of printed textile which have represented the versatility of the medium itself.

Another important printmaker, Prof Myles Calvert has largely explored non-toxic screen-printing, etching along with other mediums. According to the primary interaction, as I had with him, his basic concern about printmaking is not to take multiple impressions, rather choose the right mediums and surfaces as far as his works require.

Right through his process certainly, the uses of surfaces and the dimensions were mostly eco-friendly. According to Prof. Calvert, the uses of materials and the surface would be the essential cause of the final result of his creative productions. Including these all aspects he was more fascinated to execute his work in a distinctive manner which helped him build an individual creative language and the great exposure in the field of contemporary printmaking. His quarries and concerns about the materials and surfaces eventually created enormous possibilities to execute the final impressions. Which although connected to the routes of traditional origin but the representational approach has completely transformed through the ideology that has been manifested by Prof. Calvert's multiple layers of experiences.

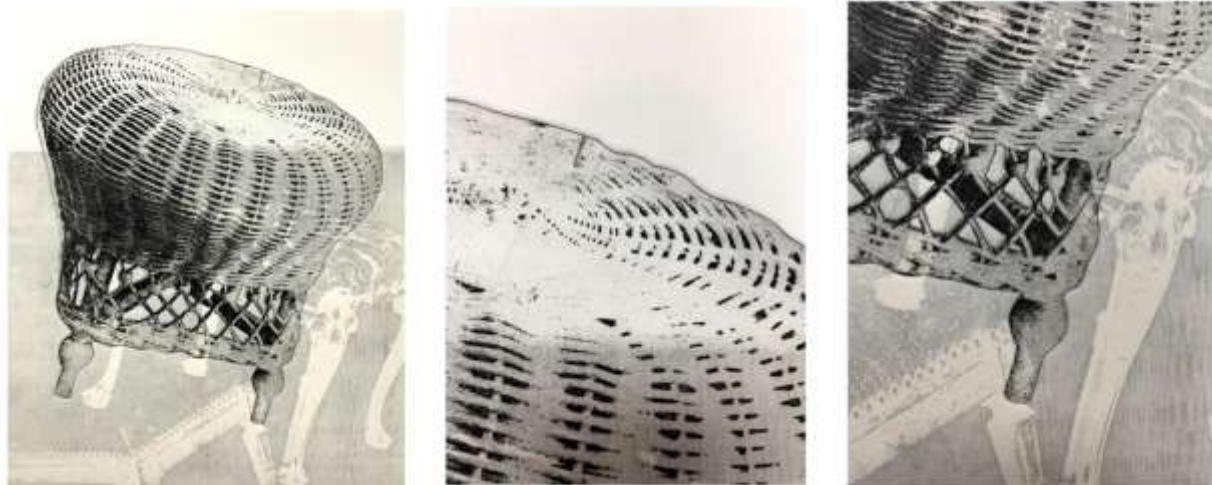


Plate-10, Wicker, Copper etching print, Non-Toxic
(Images collected by Mayes Calvert)

In the context of technical explorations, Prof. Calvert's says—

“Akua water-soluble, oil-based inks primarily for etching with copper plates. I modify them with magnesium powder to stiffen and get a similar consistency to traditional oil-based inks and also thin them down with plate oil when using viscosity processes multiple colour runs. The benefits are the water cleanup and low odor, but also the soy base recipe. It's an ink better for the environment but of course, not 100% natural.

I find the colors are saturated but not as vibrant as the traditional ones. I am not a fan of the 'drying through absorption' process... and would much prefer a flash dry or modifier to add to quicken the drying period. Although, being soy and only drying through absorption does me that the printing length and open time for use are incredibly long, making it ideal for leaving inks out, those who work at a slower pace, and for easily reusing and saving pre-mixed colors. The inks are a step in the right direction and a great alternative when not wanting to deal with mineral spirit clean-ups, chemistry, and flammable storage issues. With the increase of sensitivities and health complications being linked to ingredients in traditional inks, alternatives like the Akua brand will become increasingly available and desirable.

Distributed by Speedball Art, the Akua range is now housed in a company that has a strong reputation in the printmaking world. Being a fan of Speedball products for screenprint, I'm excited to see their invested interest in alternate print supplies, as they move into professional quality products (in addition to existing student and school grades).

For copper etching, the classic Edinburgh Etch (ferric chloride and citric acid) has always been a favorite. Messy, yes... but low without odor and low potency (when mixed properly) makes it a very safe alternative to any nitric-based process. I recommend referring to Art Print Residence (artprintresidence.com) in Barcelona, for their handling of the chemical and efficient use of space when looking at professional studios."

CONCLUSION

Being a practicing printmaker a healthy and non-polluted environment for printmaking practice would be my prime concern. This research paper and the multitude of resources and perspectives support me to reach a certain perception of printmaking practice in the context of biodegradable multi-productions. The western practice of non-toxic printmaking and their simultaneous materialistic and technical innovations give us a path of possibilities to explore the medium in an ideal manner. Eventually, we are all aware that printmaking has an ideal history of creative expressions. I feel that it is one of the most convenient mediums to express creative thoughts in a worldwide manner because of the possibility of its multi-productions. Hence, here, the importance of a healthy environment should be most essential for creating an effective impact through the practice. After walking through the several aspects of printmaking and the numerous innovations, we need to give attention to creating a healthy printmaking community to sustain in the future. However, in the Indian scene, such community studios have already started and are creating quite a broad impact in the different parts of the country. To conclude the research description, after evaluating the collective resources I would say that the conservation of eco-friendly printmaking should be the fundamental aspect for the printmaking practitioners for the sustainability of their creative productions.

ACKNOWLEDGEMENT

I express my gratitude to my friends- Arvind Sharma, Chandra Prakash Jain(Printmaker), Attri Chetan (Assistant Professor- School of Architecture, CMR University, Bangalore), Myles Calvert- (Assistant Professor at College of Visual and Performing Arts, Winthrop University), Marchelo Vera (Assistant Professor of Printmaking at The College of New Jersey) for their massive contribution. The collective resources encouraged me to start the initial research for

this topic. They have constantly facilitated me with their valuable interaction and coordination and have showed me the right way to proceed in my endeavor. I am sincerely grateful to all of them for infusing in me the confidence and motivation to carry out my research with assertion. For all this, I would once again like to thank all of them for keeping me enthusiastic and creative all along.

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