

Comparison between Traditional and New Printmaking Techniques

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Abstract

Printmaking is a diverse field of art that emerged a long time ago before it was being commercially used. Originally, prints were used for the mass production of newspapers, books, writings, etc with the help of wooden or metal alphabets. In the 19th century, printmaking emerged as an art form where multiple techniques were developed including woodcut, intaglio, engravings, screen printing, and lithography. As printmaking became quite popular and we moved towards high-tech development, we see new materials and some new techniques like Solar etching, Gum bichromate, Electronic etching, Laser engraving, Cyanotype, Silk Aquatint, Kitchen foil lithography, Salt print Process, Gocco print etc. there has been a discussion on the comparison between traditional and new techniques these comparisons are based on new material, image making, Digital Prints, Toxic and non-toxic etc. Also, I have discussed the advantages and disadvantages, how new techniques are less toxic in nature; they are environment friendly and emerged from advanced technology. Lots of Indian artists created an awareness of those techniques in the field of art.

Keywords

Traditional printmaking, new techniques, comparison, relief print, intaglio etc.

History of Printmaking in India

“Printing Reaches in India-Printing reached India exactly a hundred years after the appearance of the Gutenberg Bible, when two presses were set up by Jesuit Missionaries in Goa in 1556.”(Ram Chatterji-8). “They imported printing presses and movable types from Lisbon and it was on September 6, 1556, arrived in Goa by ship. The presses were set up and the missionaries lost no time in printing their first book that every year” (Amit Mukhopadhyay & Nirmalendu Das-5). “The presses turned out literature from movable metal types for religious propaganda. India thus gained access to the technology of printing on paper directly with metal types and not via wood blocks as in China or Germany” (Ram Chatterji-8).

Printmaking is a wide field of art in which involves a variety of techniques which makes this field unique. Artists find it exciting to explore the different techniques or experimenting with these techniques combined together. Due to large number of possibilities the medium is widely popular among the artist and today we see people from the non artist background are also curious to learn about printmaking techniques. Therefore printmaking is flourishing as a new form of art.

If we go back in time we see, printmaking was struggling to be accepted as a field of art as it has commercial roots. We see subsequent changes in the nineteen century which changed the art of printing. Conventional methods are those which are carried out in a particular manner and they are in existence for a very long time the traditional techniques such as wood blocks or metal engravings were used for printing. Eventually, many other processes like Relief (woodcut, lino cut), Intaglio (etching, aquatint, mezzotint and dry point), Planography (stone or metal plate lithography) and Serigraphy. Came along these methods have been in practiced for centuries and they are still used by artists.

As we reached the millennial era, there has been a rise in technology and we get to see new materials being replaced more and more artists were emerging in the field of printmaking which led to innovation and new experiences. Paper plate, viscosity, paper pulp, and wood intaglio were some new techniques of printmaking that emerged in the 20th century. As printmaking became quite popular and we moved towards high-tech development, we see new materials and some new techniques like Solar etching, Gum bichromate, Electronic etching, Laser engraving, Cyanotype, Silk Aquatint, Kitchen foil lithography, Salt print Process, Gocco print, Polyvinyl alcohol technique, Stereolithography (SLA), Corex/forex/vinyl cut etc.

These new changes have arised the question if printmaking will be carried out via conventional methods in the future or not. However, they have served to be influential in terms of outcome and it is much safer than the toxic process which involves the use of acid. Even digital prints today are a debatable topic. The technology has enabled us to

draw on computers and printers through a machine, but would it be the same or manual process of printmaking? Though the artists have expanded their vision, still there are contradictions in these new mediums.

Here, the comparison between the old traditional techniques and the new techniques can be measured on the basis of:-

Types of Comparison

1. Material wise
2. Changes of Image-Making
3. Impact of Technique
4. Digital Prints
5. Toxic and Non- toxic

1. Material Wise

In the field of visual art, there are countless changes that have occurred over a period of time. The use of the material has changed as what was used decades ago is no longer in practice due to arising developments. For example, oil colors were widely used by the artists until acrylic colors were introduced in the market in the era of 1950s. Acrylic colors were a better option as it has less drying time and is a non toxic medium, yet the popularity of oil paintings stands still. Printmaking has similarly experienced certain changes in terms of the material used while preparing a block or taking a print.

Changes in the preparation and process of block making - traditionally, the block or plate was prepared manually like carving a wood with tools or using hand pressure to print from the surface of the wood. Today, the traditional method is still in use along with better tools and a printing press. On the other hand, superior technologies like laser are used for wood engraving and have completely replaced the conventional methods. Another such example is, earlier acid and chemicals were used for etching on zinc or copper plates which were not very safe, however, today non-toxic methods are used like photo-sensitive methods or electronic etching which is a safer option. Similarly, the P.S. plate has replaced the method of lithography. For dry point, zinc plates are replaced by the acrylic sheet but the drawback of the acrylic sheet is that, only a limited number of prints can be obtained and it is not sustainable.

Block material - For relief printing, there was only a limited type of wood which were available

and which were suitable for the printing process. However, today, there is variety of natural woods and processed wood like MDF board, machine-made wood etc. Also, synthetic materials are used like vinyl, sun board, polymer sheet etc. are available. Therefore, we can see that from the past few decades to the present, from conventional techniques to

new techniques, there are constant changes that have occurred in the field of printmaking and in the future too, it will keep on developing further ahead. When artists have advanced technologies and materials available to them, the chances of experimenting and exploring more are elevated.

2. Changes in Image Making

The field of visual art largely depends on image-making as artists use their vision to perform or draw or write and bring astonishing ideas into their work. For example- Decades ago, artists used to create a whole setup before painting their subjects live which gives them a vision of a painting they are going to create. The field of printmaking has seen many changes conceptually as well as technically. Concept wise the changes that occurred are similar to the changes in every other field of visual art. Whereas technically, earlier images were hand drawn and carved or etched by the artist himself, but, as there are technological changes, wood carvings can be done by machine; etching can be done electrically which is faster and more effective. Therefore the process of image-making has changed drastically.

3. Impact of Technique

Inventions have led to many changes from time to time, what was in the past, what is present today or what is there in the future, change is a constant factor. The impact of these changes makes us realize the differences between the past and the present. In the field of Visual art, printmaking has seen many changes over the years and the new inventions and technology have led to the development of techniques as well as the invention of new techniques. It has a direct impact on the artist.

Printmaking in the form of art is developed from its commercial use for printing books and newspapers. Artists had a great impact on their minds once they implemented these techniques into their artwork which made them discover further. This is how printmaking became one of the fields of visual art. If we compare traditional techniques to the new techniques, the conventional methods have a particular format or the work ethic to follow whereas in the latter one, there are no rules or notions. The technology has allowed artists to be efficient and effective in their practice. It has a direct impact on the field of visual art as well as art galleries.

4. Digital Prints

Digital printing is a technique of printmaking in which an image is printed on a paper through a machine. Digital print is widely used commercially in different fields like flex printing, poster printing, newspapers, magazines, books, packaging labels etc on different surfaces like glass, plastic, metal or any other material by the highly innovative technology of printers like inkjet or laser which are efficient in producing prints at a fast rate. Even 3D

printers are available in the market today which produce a 3D object. So in comparison to the printing process that was carried out in the 19th century via the letterpress technique which was time-consuming as well as the labor force involved has lost its place today.

5. Toxic/Non Toxic

Printmaking is a process of printing that involves the use of chemicals, from moderate to harmful (for environment and health) like nitric acid, ferric chloride, sulphuric acid, benzene, chlorine, rosin, nitro, reducer, turpentine, kerosene, potassium dichromate, silver nitrate, etc. Commercially, when the printing started, oil-based inks were used for quality printing and when artists took a chance on this technique, they used the same material as used in the industry which is not very safe when it comes to health.

Today, Printmaking techniques are practiced in two areas - toxic and non-toxic. The toxic one is where artists use chemicals or acids to work on block making like etching in the acid (with precaution) and the other is where oil-based inks are used for the process of printing. Whereas, the non toxic area is where artists use non-toxic plates for block making as well as water-based inks which are not a concern for health or the environment. Sometimes, block-making can be done by a chemical process while the printing process can be carried out using water-based non-toxic inks. The use of chemical-based processes is also dependent upon the type of technique to be practiced. Some techniques cannot be carried out without non-toxic products, therefore, chemicals and acids are meant to be used such as aquatint etching, and cyanotype. As discussed above, there are many techniques that are toxic and many new techniques are developed which are non-toxic in nature.

Advantages or Disadvantages

New techniques are slowly becoming a part of printmaking as we see the process of obtaining a print is quite similar but the change of material has led to the innovation. There were some drawbacks of traditional techniques which led to the innovation of new ones. Here we are going to talk about some advantages and disadvantages of these new techniques.

Advantages

Less toxic/non-toxic:- the new techniques involve advent material which has a less adverse effect on the environment and health. Many techniques such as solar etching, laser engraving, silk aquatint, etc. are non-toxic in nature. No acid is used during the process of preparing the block. Today, we see water-based ink which can be used instead of traditional oil-based inks which were hazardous to health as many artists reported respiratory discomfort and skin problems.

Environment friendly:- the new techniques, as mentioned before, includes new material. This material is not only efficient for the artists but they are made environment friendly too keeping in mind the adverse effect on nature.

Advanced technology: - as we moved through the stages of development, the technology led us to the finest material which does not evolve into toxic material. Techniques like laser engraving, gocco print, and 3D. The printer uses some high technology in which very less manual labor is required to prepare the block. Today, we see digital prints which are a product of machine-made printing. However, they are not yet completely a part of printmaking art but as we are continuously moving towards a new era of advancement, they may become a part of it very soon.

Disadvantages

Expensive method: - the new techniques, no doubt, have proved to be efficient but they are still not used by the majority of artists because they are not cost-effective. As the technology is used to create new materials, they come with a cost that is not affordable to all artists. The polymer sheet used for solar etching is quite expensive and cannot be used again.

Consumption of time: - the laser engraving or 3D printer works according to the size and design of the works. A small area may take hours to complete if the work is intricate. A 3D Printer takes around six to seven hours to prepare a small area of 5x7 inches not only time but it also takes a lot of electricity which makes it expensive.

Non availability of material in the local market: - the technology has taken over the majority of tasks today; therefore, we might see these new techniques as the future of printmaking. Artist today are rapidly moving towards the new practices and non-toxic. Material, it wants to be far when the traditional process and use of the material will be long gone. Also, the material is not easily available in the local market.

Future aspects of New Techniques

It is difficult to be affirmative about the future of printmaking in India. But as we learned about the history and the present times, we can predict what the future looks like in the field of printmaking. The new techniques are product of new advanced technology which will keep on developing in the upcoming decades as we witness the same till now. Artists are now aware of health, safety issues as well as the environment too. The future of printmaking rests upon the practices and their will to explore different materials and techniques. We are already witnessing an incline towards the fast digital age; the new techniques are becoming a new language in the community of printmaking. Therefore, printmaking may enter a new dimension with all the advancements but the process and mythology cannot be demised.

Thought Process of Artist (Past, Present and Future)

Thoughts play an important role when it comes to the subject or concept of an artwork. It is the artist, whose thoughts and imagination allow him to develop an idea and

later that idea is transformed into an artwork. As the decades are passing by, we have developed, invented and been through so many changes that today the times are better and human life is more developed in terms of technology. The sharp minds of human beings have taken the world by storm; the conventional methods have seen a huge development. Technology has taken over most parts of our day-to-day life.

The field of visual art also has drastically changed since the medieval times. The practices in visual art have changed to an extent. The innovation and scientific advancement have brought significant changes in the thought process of an artist. These contemporary changes are therefore compared for a better understanding of the progress and the future. Not only has the concept of artists has changed from landscapes, and portraits to contemporary themes and mixed media but also the very formal practices have taken a step back, and now different techniques are combined together with non-standard material.

The new techniques have broadened the perspective of the field of printmaking. These new techniques are a part of traditional techniques only which have developed over the time through art practices. It will be interesting to see how these techniques will be pursued in the future by the upcoming artists, will they flourish into more developed techniques or will they vanish with the advancement of technology?

Apart from technology, the thoughts of an artist are affected by the surroundings; the change in environment brings new subjects, concepts and ideas to the artwork. More opportunities are available to artists as compared to the past when art can be seen only in the art galleries. The Avant-Garde movement brought remarkable changes where artists no longer depended on the galleries. Various platforms are there today where an artist can showcase their artwork like social media, virtual art exhibitions, or art fairs. Digital media has taken a quantum leap, now artists use computers and tablets to draw their ideas, paint them digitally and even sell them virtually. The younger generation has broken down the traditional processes and practices.

Conclusion

Through my research of this topic, I have come to know that change is constant. From the ancient times to the contemporary era the amount of change between these two times is huge. We see changes in block making such as from clay blocks to wood and copper, today we are using high technology like polymer sheets, acrylic, foam sheet etc. for preparing the block, tools were used to carve in the block while today we can prepare the block through mechanical processes like laser engraving and router cutting. The technology has made a huge impact as we see in these changes. Today, most of the practices of artists are experiment-based, abstract forms or use of texture is prominent in the artworks. Printmaking involves various kinds of material which is not always safe or environment friendly but today we have the option of non-toxic material available to us.

It is difficult to be affirmative about the future of printmaking in India. But as we learned about the history and the present times, we can predict what the future looks like in the field of printmaking. The new techniques are product of new advanced technology which will keep on developing in the upcoming decades as we have witnessed the same till now. Artists are now aware of health, safety issues as well as the environment too. The future of printmaking rests upon the practices of artists and their will to explore different materials and techniques. The younger generation has broken down the traditional processes and practices and opted for the new practices. This is the time when it shifted from serving a commercial purpose to making art with different techniques.

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