



ORIGINAL RESEARCH PAPER

Arts

ODISHA'S PALM LEAF ENGRAVING

KEY WORDS: Palm leaf engraving

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ABSTRACT

Odisha is a land of tradition. Here art, music and literature collaborate together. And print making has its humble origin in the palm leaf era. The involvement of etching and engraving in the palm leaf art genre settles it in the print making sphere.

INTRODUCTION

Odisha has been a hub of various whimsical artistries and one among it is Palm leaf engraving, which is one of the most ancient documented crafts of the world. It is a very complicated art form done by amazing engraving over a fragile yet sturdy palm leaf. We all know that Odisha has a proud position in the country in respect of highest of highest concentration of Palm leaf manuscripts, especially illustrated manuscripts. The art of palm leaf engraving originated around 2000 years ago near about 5th century BC when written communications began. Long before the invention of paper and pen, palm leaf was used as a means of writing letters, messages and manuscripts to be disseminated. They were also used to record the moments, traditional narratives and pass on knowledge to the forthcoming generations. Palm leaves were used in the royal courts most commonly to inscribing the horoscope of every new born child in the length and breadth of Odisha. The horoscope was prepared by a particular community known as Nahakas. They are also called as Abadhan as for they forecast future of the child and get it recorded in the horoscope. In almost every horoscope they record words, draw zodiac signs, record numbers and draw figures of gods. Palm leaf manuscript is one of the ancient medium of writing in India, particularly in Southern India, the practice that has led to the origination of exquisite palm leaf paintings of Odisha apart from writing Horoscopes. The ancient art creators devised the writing on palm leaves to an art form illustration through engraving. Odisha has a rich cultural heritage with an honorary beginning since ancient times. The ancient name of Odisha, "Utkal" means the land of excellence in art. In every field of art whether it is sculpture, architecture, textile, handicrafts, music, dance, and painting everything is beautifully depicted by Odia artists. From its beginning up to 20st century the ideas, style and pattern of palm leaf engraving is almost same and it has been an integral part of culture and tradition of Odisha. Through minute observation of these illustrated manuscripts, one will find typical Odia style which has been adopted in these engravings. Illustrated manuscripts can be found from all over India but here the art has reached its perfection and excellence because of the love for art-like life by the people of Odisha and the innovative techniques like cut-outs, stenciling, use of coloured cloths and various kinds of attractive artifacts. Palm leaf engraving holds charm with its fine lines, minimum colorful motifs and handicrafts along with the outstanding pictorial depiction on the decorative. Palm leaf engraving is a treasured art which is blooming under pastors of craftsmanship of Odisha and needs more space in this tremendous market to get recognition, admiration, love and sale. Tala Patta Chittra, the artistry was initially used for writing horoscopes and decoration of manuscripts with illustrative depiction of the stories and took over become an art on its own. From passing on information on manuscript to coming generation to narrating mythological tales to the public, to making horoscopes to cards to other utility products like Tea Posters, Canisters, Lamp Sheds, Flower Vases and

many more decorative items, the art had travelled a long way.

Review Of Literature

Engraving has been taken from Greek word that means to sculpt or scratch. Historically, engraving was a form of art involving the use of tools to create deep lines in a piece of metal or stone using hammers and chisels. The art of engraving being the oldest art forms shows the evidences from prehistoric bones, stones, rocks and cave walls in various parts of the world. According to Archeological survey from around forty thousand years old is Gorham's Cave, Gibraltar, the first example of rock engraving in an abstract form of deeply impressed was attributed to Neanderthals (extinct species or subspecies of archaic humans who lived in Eurasia) which depict the graphic expression of prehistoric period with the use of robust pointed lithic tool. Similarly the first evidence of humans engraving geometric patterns was a chiseled shell dating back between 540,000 and 430,000 years from Trinil, in Java, Indonesia, where the 1st Homo erectus (extinct species of archaic human from the Pleistocene) was discovered. Hatched banding upon ostrich eggshell used as water containers found in South Africa in the Diepkloof Rock shelter and dated to the middle stone age around 60,000 BC are the next documented case of human engraving. The art of engraving has been in existence since civilization began and the people in ancient times engaged themselves in this art to honor gods and their rulers. The existence stone carving in Serengeti show that the art has been there for nearly 500,000 years. Statuettes of fertility goddess (Venus of Willendorf) discovered in Willendorf, Austria has been estimated to be created between 40,000-15,000 BC. Beautifully carved gemstones bearing the likeness of ancient leaders (Alexander, the Great), Roman historian and scholar (Pliny, the Elder) were found in **Egypt and Rome** in the first centuries before and after Christ, Sumerian and Hillite carvers began engraving "Seals" (cylindrical ornaments made of gemstones such as Soap stone and Lapis Lazuli) with intricate designs and cuneiform writings carved on them. The practice gradually shifted towards decorating things of everyday usage. Mesopotamian carvers made seals along with carved and polished beads in huge amounts. Engravers in Central and South America primarily created Jade to create ear-plugs, masks, and plaques along with household items. One of the most commonly engraved product found in **Egyptian civilization** apart from the above mentioned items was the scarab (an oval-shaped carving looking like beetle) after worn as an amulet to remind them of the afterlife. The designs and hieroglyphics ranged from prayers for the dead to records of memorable events in their society. The discovery of engraved Rosetta stone with edict was decoded, using the **Greek** engraving, Champion was able to decipher the mysterious hieroglyphics opening up the world of information and unlocking the key to Egyptian civilization.

After excavation of the large urban centers of Harappan

civilization hundreds of square-shaped stamp seals engraved with images of wild or domestic animals, humans, fantastic creatures and possible divinities (Pashupati seated cross legged in center with animals around) along with numerous small seals generally cut from steatite (soap-stone) agate, chert, copper and fired terracotta carved in intaglio or incised with copper bur (cutting tool) were discovered. Dholavira, a Harappan city included in UNESCO World Heritage has the largest inscriptions. Inscriptions in Indus script on copper plates, the fine and shallow engraving, the robust structure of the plates, the wear of the inscribed metal surface. Trails with simple ferric oxide and carbon black inks confirm that the plates can provide even after four thousand years, quite satisfactory printed impressions media including silk as would even have been available for millennia ago. Then it is suggested that these unique copper plates are world's earliest known printing plates, and moreover would have provided earliest printed works of art. One of the most common motifs "The Unicorn" on Indus seals appears to represent a mythical animal that Greeks and Romans sources trace back to Indian subcontinent. So it is evident that an engraving on bones and ivory is an important technique for the art of the Upper Paleolithic and larger engraved petroglyphs on rocks which were found from many prehistoric periods and cultures around the world. With due course of time Ashoka's stone edict at Dhauhi was formed with the oldest writing in Odisha which was created about two thousand years ago in the 3rd century BC.

The next chronological order is a stone inscription in the Hati Gumpah cave at Udaygiri which is the edict of Kharavela. Some copper plates, proving Gupta rule in Orissa are found in Ganjam and Puri districts. Plates bearing inscriptions both in copper and stone have been found in Odisha. In the 15th century in Tamil and Telugu language, the scripts were bound to be transferred on palm leaves (due to absence of papers) and Odisha being politically, socially and culturally in contact with these states during the period of Kharavela got influenced. Before 14th century the language of inscription was Sanskrit as proved by the copper inscription of Ganga King Narasimha IV. Later during 15th-19th century the stone inscriptions fixed on either sides of the steps leading to Natamandapa of the Jagannath temple fixed by the Suryakings, Kapilendra, Parnashottam and Pratap Rudra gradually took a different shape when used on Palm leaf manuscript on the basis of development of the Odia script. Mythological stories like Ramayana and Mahabharata are depicted on the leaves. Recently the oldest version of Valmiki's Ramayana was found in Nepal which has been done as manuscript palm leaves. It is believed they were being used as far back as 5 BC. Likely having originated in India, Palm leaf manuscripts have appeared through South and South-east Asia. In the absence of paper the poets, scholars, felt the need of preserving their writ ups and ideas on palm leaves for ritualistic and artistic purpose. Thousands of years of Asian wisdom and knowledge are recorded in these manuscripts, several of which are exquisitely illustrated. Engraving originated independently in the Rhine Valley, in Germany and in Northern Italy about the middle of 15th century. It exploited copper engravings and new form of print making resulted using intaglio techniques. The earliest engravings were produced in Germany in 1430s, but the first monumental engraving rivaling painting in their ambition, were created in the 1470s in Germany by Schongauer and in Italy by the Italian painter Andrea Mantegna. Albert Durer influenced by Martin Schongauer, was the most innovative of Rhine engravers. Copper engravings allowing more detailed reproduction was more expensive and became generalized in 1430 in Rhine Valley and took advantage of gold-smithing. As early as 5000 B.C, cultures such as the Sumerians created jewellery by carving designs into metals like gold, silver and copper. In the middle ages goldsmiths engraved metal works to decorate armors, musical instruments and religious objects. In Northern Europe the wood cuts (relief process)

developed parallel to the use of paper, which made it possible to reproduce prints in large quantities and reached a popular audience.

Print Making Process

Intaglio Printing, in visual arts, one of the four major classes of print making techniques, distinguished from the other three methods (relief printing, stenciling and lithography) by the fact that ink forming the designs is printed only from recessed areas of the plate. Among intaglio techniques are engraving, etching, dry point, aquatint and mezzotint.

Engraving is a practice of incising a design onto hard, usually flat surface by cutting grooves into it with a bur-in. Engraving is one of the most important techniques in print making. Engraving was a historically important method of producing images on paper in artistic print making, in map making and also for commercial reproductions and illustrations for book and magazines by 19th century. Engraving, technique of making prints from metal plates into which a design has been incised with a cutting tool called a burin. Modern examples are almost invariably made from copperplates, and hence the process is also called copper plate engraving. Another term for the process, Line engraving derives from the fact that this technique reproduces only linear marks. Tone and shading however can be suggested by making parallel lines or cross-hatching.

Dry point next to engraving, dry point is the most direct of the intaglio techniques. Engraving is precise, dry point is rugged, warm and irregular, Dry point is made by scratching lines into metal plates with steel or diamond point needles. The angle of the needle has much more effect on the width of the line than the pressure does. If the needle is perpendicular to the plate, it throws burr on both sides, which then produces a thin double line; for wide lines the optimum angle is 60°. Copper plate is the best for dry point.

Etching is an intaglio printmaking process in which lines or areas are incised using acid into a metal plate in order to hold the ink. In etching, the plate can be made of iron, copper, or zinc.

Mezzotint is a monochrome printmaking process of the intaglio family. This technique can achieve a high level of quality and richness in the print.

Aquatint is an intaglio printmaking technique, a variant of etching that produces areas of tone rather than lines.

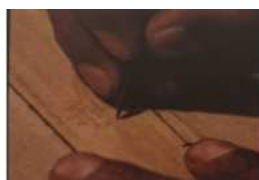
Literature Pertinent To The Study

Palm leaves were among the 1st writing materials to be used, and some sources say that Sanskrit was 1st written on this material more than 6000 years ago. Palm leaves were used as writing material in the Indian subcontinent and in South East Asia reportedly dating back to the 6th century BC. Their use began in South Asia and spread to other regions as texts on dried and smoke-treated palm leaves of Palmyra palm or the Talipot palm. Their use continued till the 19th century when printing press replaced the hand-written manuscripts. A variety of knowledge and cultural forms besides religious texts, palm leaf manuscripts were also used for philosophy, medicine, science mathematics and astrology, Palm leaf manuscripts are typically arranged in bundles that contains multiple texts. Illustration always makes a subject lively, communicative and realizing than words. They supplement the verbal account with a visual scene and therefore have a direct communication with the mind, which is the touchstone for an artist. Illustrated manuscripts were indeed costlier to be produced than plain ones and were affordable only for the rich. Gradually the demand for illustrated manuscripts mounted and became a status symbol for the sophisticated with a literary background. The palm leaf illustrations are mainly of two types, simple engravings or illustrations in pure

line on palm leaf and engravings with color fillings. The majority of the illustrations are in the line only. Palm leaf illustrations are executed on oblong palm leaf. When these are intended for a manuscript they are bound together with a thread, passing just through the middle of the leaves. Palm leaves are also used to draw pictures of different Gods and Goddesses. In North India Palm leaves were written with ink where as in South India and along the Eastern Coast up to and including Odisha, seasoned palm leaves are incised with a stylus. The letters are the blackened by rubbing a cloth steeped in a mixture of oil and lamp black across the surface of the incised leaves. Such weighted metal writing styluses come in wide variety of shapes and sizes. The leaves are dried for a month or two and put into swamps. With iron stylus the leaf is etched or engraved. Then colour is spread with a cloth all over the leaf. The colours are organic and 100% natural and made by the artist themselves. There are five basic colours. They are White, Black, Green, Yellow and Red yet other colours are also used. What is more surprising is to know they extract colours from conch shell, lamp soot oil, green leaves. Each and every step is carried without machines. The dedication and involvement through the process is exemplary. The artists have been doing from ages as their duty to paint for Lord Jagannath.



Palm leaf engraving joining multiple palm leaf
Palm leaf engraving with stylus



Palm leaf engraving with ink
Palm leaf manuscript 19th century



Palm leaf copies of *Amarusataka*, the *Gita Govinda*, the *Usabhillasa*, the *Usha Harana*, the *Lavanyabati*, the *Koti Bramhanda Sundari* the *Vidagadha Chintamani*, the *Raso Kallola* and *Sarvanga Sandari* were most popular and widely available on palm leaves across the length and breadth of Odisha, where Brahmins and Pandits lived, maintained libraries of manuscripts containing religious books.

Palm leaf was also used to prepare Horoscopes and invitations to marriage, birth ceremonies etc. which has come to an end because of its incompetency with printing press and is restricted to places like Odisha (Puri, Bhubaneswar, Jajpur etc.) and South India. On the banks of Bhargavi River that flows across Odisha Raghurajpur is now on the global map for its Pattachitra or scroll paintings on cotton, Nayak Patna is home to Pothi Chitra artisans who are stills struggling to get the attention that the sister art form has received.

Palm-leaf engraving and etching of Raghurajpur, Odisha, is an age-old hereditary craft that is practiced by the Chitrakars artist families. Stories from the great epics are etched on the taad or palm leaf. It is believed that this craft originated during the building of the temple and continues even today.

A preliminary survey of palm leaf artists revealed that there are around 1000 palm-leaf artists are in Puri, Khurda and Cuttack districts. Large numbers of pictorial palm leaf manuscripts are preserved in different museums and temples of Odisha. Today, text has made way for pictures and palm leaf

engraving is more about the pictorial representation of these ancient stories, with text being limited to wedding cards and horoscopes etc. Though palm leaf engraving is a rare and vibrant painting form of Odisha from the medieval period, it is really astonishing that the tradition of scribing on palm leaf and illustrating the literary creations has flourished for centuries in Odisha and survives even to the present day. The ancient art innovators at Odisha refined and devised a new technique of Etching and Painting on Palm leaves. The perfection in painting, the unique engraving style and the knowledge of dyes, makes the art, one of the most creative and mesmerizing art form in India.

MATERIALS AND METHODS

Nature of Palm leaf: There are two species of palm tree botanically known as *Corypha umbraculifera* (Talipot palm tree) and *Borassus flabellifera* (Palmyra palm tree), which are found in India. The first one grows widely in dry areas like Gujarat, and Rajasthan while the second one is plentiful in humid coastal areas of south India, particularly the west coast. Both the Palmyra and Talipot are fan palms, but the leaves of Palmyra are thick, of shorter length and difficult to write on, whereas those of Talipot are thinner, longer and delicate. The latter variety is flexible and has tensile strength, which makes it more durable. Palmyra manuscripts were written through incision with an iron stylus, whereas Talipot manuscripts were written with reed pen and ink. In Orissa, Palmyra leaves were used though in neighboring Bengal and in western India Talipot manuscripts were used. There is no evidence of the use of Talipot in Orissa.

Processing of Palm leaves: Even the processing technique of palm leaves in South India was different from that of North India. Earlier, people followed a rigorous and lengthy pattern that made the durability of manuscripts longer, whereas current pattern is totally commercial based and could not be preserved for long. In Odisha, different types of procedure carry out for the development of the palm leaves to manuscript. One of these methods, the fresh young palm leaves which are just about to open is selected. Artisans' source palms leaves are identified by members of the Pothi community, who climb the tall palm trees, cut the branches and dry the leaves for around a month in the sun. The leaves are then boiled or soaked in water, treated with turmeric, which adds a golden hue as well as anti-bacterial properties, preventing them from decay, next dried again and in the end, after that they are polished with a smooth stone or conch shell and cut into proper size to get a rectangular-shaped even surface, which closely resembles an off-white strip of paper. These rectangular leaves of similar size are sewed together to make a bundle or Pothi. First, the artisan draws the outline using a pencil on the surface of the leaf.

Then a sharp needle, locally called Stylus / 'lekhani' or 'likhan' is used to etch the graphite linings. This arduous task requires attention to detail and an artist can take anywhere between ten and twenty five days to create one art piece. The colour to fill the engraving is prepared using coconut shell or earthen diya, which is burnt to obtain black dust. Other colours used are organic and 100% natural and made by the artist themselves. There are five basic colours, White, Black, Green, Yellow and Red yet other colours are also used. What is more surprising is to know they extract colours from conch shell, lamp soot oil, green leaves. The colour paint is applied evenly across the entire surface of the palm leaf, filling the minute needle engravings and tainting the usual dull surface. Lastly, the coloured leaves are washed with soap or cleaned with a cotton cloth, which purges the extra colour. Some artists also use a chisel to highlight certain areas of the painting or add borders. Each and every step is carried without machines. Palm leaf engravings remain its actual structure for several years. Paper can wear away, but these palm leaf engravings don't and that they can be easily cleaned with a cotton cloth.



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Processing of Palm leaf into Pothis

COCLUSION

In Odia culture palm leaf engraving are extra affectionately associated with the socio-religious life of the people. It is vibrant and living even today but the purpose, context and content of writing on palm leaf have radically changed. Though the artists are following this traditional writing system but the purpose is by some means commercial. Nowadays the scribe-artists are mainly concentrating on popularizing the illustrated works rather than the work of literature. The only original documented kind of work on palm leaf a scribe follows today is the horoscope. Many social organizations are now working in Odisha for the promotion and development of this art. Palm leaf engraving though one of the ancient, traditional art form in Odisha and other parts of India, still holds its significance in contemporary art and craft process and print making procedures. With the technological advancement and support from government and non-government organization, the conservation of old lost palm leaf manuscripts are being preserved and renovated into modern art forms. Newer added artistic minds and techniques, the old ways of palm leaf engravings have found newer heights of success and modern ways of commercialization. Though seems difficult, the mass reproduction of palm leaf engravings into paper, cloth or other media is possible and is being used in many parts of Odisha and Southern India. This provides a benchmark achievement in the field of art and print making.

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