

Dyeing arts of India: A study on the traditional craft form of printing wood blocks of Pethapur, Gujarat

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Abstract : Block printing is a traditional and artistic method of textile design that involves stamping fabric with intricately carved wooden blocks. The renowned Saudagiri Trade of the late 19th-mid 20th century has made Pethapur a Printing Block manufacturing hub. This craft involves the meticulous hand-carving of wooden blocks to create intricate designs. The process includes preparing the wood, tracing the design, engraving and dipping for seasoning the blocks which makes it ready to be printed on cloth with colours. Pethapur is one of the few existing centres globally practicing this art and among the three clusters in India upholds the cultural richness and designs through Indian history. With the rising mechanization, handmade blocks for printing is dying out with only 4 households practicing this at present. This paper tries to highlight the importance of the craft and how it can be revived.

Key words: Traditional handicrafts, GI tag, Wood engraving, Textile printing

Introduction

Traditional handicrafts have gained global recognition, with increasing demand for unique, handmade products (Barrett, 2018). Block printing in India is also widely known as “woodblock printing”, “woodcut printing” or “hand block printing”, and is a traditional and elaborate art form that uses hand-carved wooden blocks. It is a labour-intensive craft that relies on the ‘relief’ of its blocks to transfer design which when stamped in ink or dye is pressed along the length of the fabric to create its patterns. In order to make the block, the design is drawn on paper and attached onto the wooden block which is then carved according to the design on top of it. This carved block is then used to print by using specially prepared dye baths. The printed design comes in a mirror-image of its carved pattern. Traditional Pethapur block patterns were exclusively intended for export fabrics and the patterns were inspired from the medieval architecture of Sarkhej and Patan in Gujarat. The craftsmen have a collection of over 2 lakh designs where some are traditional while others are customized specifications given by designers. The craftsmen divide them into categories based on their origins like ‘Ajrakh’, ‘Bagru’, ‘Sanganer’, ‘Saudagiri’, etc. This article elaborates on the status block engraving art of Petapur town, near Kalol and

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Gandhinagar in Mehsana District of Gujarat. It is also popularly known as a ‘The Craftsmen’s Village’ and a hub of wood block makers, who supply customized blocks to the centres of block printing all over the India and outside India.

Block printing is a traditional textile and fabric decoration method that has been practiced for centuries in various cultures around the world. However, in the face of modernization and changing consumer preferences, this age-old craft has faced challenges and dwindling popularity. Reviving block printing ensures the continuation of these traditional skills, preventing their disappearance and preserving the intangible cultural heritage of a community. It must be ensured that this craft remains a vibrant and integral part of our cultural tapestry and a source of economic and environmental sustainability.

History

A cotton cloth printed by Pethapur printing blocks is kept in the Victoria Albert Museum of London, Britain; is one of the predominant evidence dated 1850. This method of printing originated in Asia, specifically China; and some of the earliest examples of Chinese woodblock printing dates back to pre-220 AD. Block printing is considered to have originated in China during the Tang Dynasty (618-907) to reproduce text and illustrations (Britannica, 2015) mechanically. The matter to be printed was engraved in wooden blocks, which were inked and pressed onto paper to create the desired impressions. In contrast, printing on textiles preceded printing on paper in India, Egypt, and Europe (Chopra et al., 2011). The method used for textile printing was the same as that used for paper printing (Kaur et al., 2013). According to Edwards (2016), clear evidence of block printing emerges only from around the medieval period, with the earliest proof emerging from Egypt and Indonesia.

The oldest surviving woodblock print in the world seems to be the ‘*Pure Light Dharanisutra*’, a small Buddhist scroll discovered in 1966 at the Bulguksa Temple in Gyeongju (South Korea) (<https://www.historyofinformation.com/detail.php?id=187> retrieved on 9.9.23). The Chinese chronicles report the arrival of printed cloth in China from India in 140 BC. Samples of Indian block printed fabric have been found in Europe, in the 16th century grave of ‘St. Caesarius of Arles’ (France) (Gaatha, 2022). Scholars have deduced that it was published under the Silla dynasty, around 751. The earliest known example of block-printing is a copy of the Diamond Sutra from the year 868 (currently in the British Museum). Block printing reached its peak during the Mughal period, when such textiles were used in the royal household and it is said that tents were made from printed fabrics which became a necessary part of royal processions. Rajasthan saw its own specialised development of printing and dyeing cotton, while Gujarat became a centre for printed fabrics using specialised blocks. With the British East India Company engaging in trade with India, the various indigenous textile practices including the hand block printing found themselves seeping into European societies. The country was one of the largest exporters of textiles from the 16th century specialising in ‘Chintz’, the name given to any cotton or linen fabric with floral patterns and fast colours. This accelerated its global reach and scope that has earned

itself as a respected and admired traditional textile practice. The emergence of such trade eventually gave rise to what is known as ‘Saudagiri’ prints, the name being derived from the Persian word *sauda*, which means “to trade” (Sunanda, 2009). In the 12th century, certain centres in the Indian subcontinent such as on the south, eastern and western coast were noted for their printed textiles. Wood block printing techniques (Ukiyo-e) are well preserved in Kyoto, Japan where prints are mainly done on paper that transformed from monochrome prints to multi-coloured ones.

Objectives and Methodology

The main objective of this study is to spread awareness regarding the dying crafts of India, some of which have global or legal recognition in the form of Geographical Indication Tags and yet, remains unknown to a large population in India especially its consumers. The study also highlights on the plight of the craftsmen, their economic prospects and challenges to continue the handicrafts against mechanization and similar global products. Thus an effort to revive its market for preserving cultural heritage and fostering economic development of the locals have to be taken up. The methodology is mainly qualitative where ethnography and case study methods are applied through one to one interviews, group discussions, participant observation, and document surveys. The households that exists in Pethapur making blocks and block print textile sellers from Gandhinagar were interviewed to understand the status of the craft.

Block Printing and Textiles

Historically, the block printing on textiles was practiced along the banks of the River Indus (or Sindhu) now divided between India (Kutch in Gujarat, Marwar in Rajasthan) and Sindh in Pakistan. Dhamadka is a small village in Gujarat about 50 km east of Bhuj, is known for the block printing. It is believed that 400 years ago, a group of Khatri settled in Dhamadka and started practising their craft. This is said to be the roots of block printed textiles with the most sought after export material being the ‘Ajarakh’ resist printing of Dhamadka and Ajarakhpur in Kutch (<https://www.incredibleindia.org/content/incredible-india-v2/en/destinations/bhuj/dhamadka-block-printing.html> retrieved on 21.09.2023). Here printers mostly use madder root for printing red colour, rusty iron solution for black colour, and indigo for blue colour. When people from Iran and Arabia reached the Sindh region in the 7th Century, they were attracted to these bright and colourful textiles and the term *Ajraakh* may well be derived from the Arabic ‘*Ajrak*’, meaning blue. The ‘*Matani-Pachhedi*’ or Kalamkari was for religious purpose made by the ‘*Devi Pujak*’ community with a combination of block printing for the outline of the pattern and the painting of the mordant or dye fixative substance used to set (i.e., bind) dyes on fabrics techniques. Vegetable prints from Dessa, Ahmedabad and Kutch, ‘*Batik*’ prints from Bhujpur, Mundra and Mandvi villages of Kutch and ‘*Saudagiri*’ prints of Ahmedabad are famous even today. The other well-known centres for block printing in Gujarat include Bhavnagar, Vasna, Rajkot, Jamnagar, Jetpur and Porbandar.

There are three techniques of block printing namely, a) *Discharge Printing*: Firstly, the fabric is dyed on which printing is to be done. The dye is removed from the part of the fabric on which

designs are to be made using a chemical. Then those segments printed are treated so that they can be re-coloured. Discharge printing is used to create a white pattern on a colourful background where printers place a simple bleaching agent on the wooden blocks and stamp them to achieve this. b) *Direct Block Printing*: The fabric used here is either cotton or silk. The cloth is first bleached, and then dyed with the desired colour. Block printing is first done on borders with carved wooden blocks dipped in dye, followed by the inside borders, and c) *Resist Printing*: In this technique the part of the cloth which is not to be dyed is covered with the paste of resin and clay. Then the fabric is dyed with the desirable colour, at this stage the dye penetrates through the cracks which create wavy effect of colours on the cloth. After this the fabric is finally block printed.

In olden times it was done with natural dyes but now it is done with artificial colours and synthetic dyes. The colours commonly used for printing were saffron, yellow, blue and red. Pre-washed fabrics give vibrancy to the designs. The fabric is dyed and is spread over the printing table, tucked in by all pins properly to prevent any misprinting. The carved wooden blocks of the designs are dipped into the dyes or colours and stamped on the fabric with a force of hand. With the blocks created today, about 50 meters of Ajrakh designs and 70 to 80 meters of boti or geometric shapes can be printed per day. This process takes time and energy as each colour block is stamped individually on the fabric which brings out the best of woodblock printing or block printing art.

At present block prints are observed in few pockets across India, with each region having its own distinct style, motifs, and techniques, making their block prints unique, adding to the cultural and artistic diversity of the country's textile heritage. .

- i. Ajrakh Prints are generally from the Kutch region of Gujarat and Rajasthan, and Sindh in Pakistan. The prints consist of complex symmetrical geometric patterns made of squares, stars, circles, and ellipses with dots in between rendered in madder red, indigo blue, and white created with resist and mordant (Dua, 2016). The process involves resist dyeing and multiple rounds of block printing was inspired by Mughal designs. Kutchi Rogan Prints of Gujarat uses castor oil-based paints to create rich, textured designs. The motifs are often inspired from nature, and are used in textiles as well as wall art.
- ii. Sanganeri Prints of Jaipur in Rajasthan, and are known for its Calico printed bed covers, quilts and saris, printed repeatedly in diagonal rows. *Doo Rookhi* Printing is also famous where artists print on both sides of the cloth. The traditional Sanganeri patterns have been in existence for as long as 250 years had a strong Persian influence and features delicate floral motifs spaced evenly across a white, pale blue or yellow field. The flowers depicted in the '*Buttis*' or '*Buttas*' usually, are iris, narcissus, lily, rose, carnation, etc. These prints typically use natural dyes, and are characterized by their use of fine lines and vibrant colours.

- iii. Dabu and Bagru Prints from Jaipur Rajasthan involves a mud-resist dyeing technique, resulting in a slightly raised, textured pattern. Bagru is famous for its Syahi-Begar designs in a combination of black and yellow ochre or cream, while in Dabu portions are hidden from the dye by applying a resist paste.
- iv. Saudagiri Prints near Varanasi in Uttar Pradesh, is famous for its block prints and feature intricate, often floral, motifs in vibrant colours and the 'Buttas' or 'Buttis' were interconnected through a lattice-work or creeper pattern. These prints are popular for clothing and home textiles.
- v. Bagh Prints, in the Dhar district of Madhya Pradesh, are characterized by their bold and intricate geometric designs, often using black and red dyes. The process involves repeated hand-block printing and a unique resist dyeing technique.
- vi. Batik Prints of West Bengal involve using wax to create patterns on fabric. The waxed areas resist dyes, resulting in unique, crackled patterns. These are known for their vibrant colors and abstract designs.
- vii. Kalamkari Prints of Andhra Pradesh and Telangana are often divided into "*Srikalahasti*" and "*Machilipatnam*" styles. They feature intricate hand-painted or block-printed designs depicting mythological or natural themes. These prints are characterized by the use of earthy colours and fine detailing.
- viii. Pochampally Ikat from Pochampally, a town in Telangana, is famous for its *Ikat* weaving and block prints. The textiles feature complex geometric patterns and bold colour combinations. The designs are a result of resist dyeing techniques applied to both the warp and weft threads before weaving.
- ix. Kalahasti Kalamkari of Srikalahasti in Andhra Pradesh depicts Hindu deities, mythological scenes, and intricate patterns. It combines hand-painted and block-printed elements, resulting in exquisite textiles.
- x. Dharwad Prints in Karnataka, has its own block printing tradition, known for their bold and vibrant geometric patterns, often using black and red colours. The resist dyeing technique is a common method in this style.

The Process of Block creation

A unique feature of these blocks is the use of Teak (Indian Oak) or 'Saagwaan' wood. This wood is of high quality and the veins are spread out, making it highly suitable for chiselling the designs and are known as Bunta, Biba or Uran in local languages. The 10 ft long logs are mainly procured from unorganised sellers, mostly those dealing with old buildings that are being demolished within a 20 km hinterland. The rate today stands at INR 220-300 per kg with some transport cost. The cheaper or low-quality woodblocks are generally warped together, i.e. multiple pieces are stuck together. Every block consists of a wooden handle while some also have 2-3

holes which are made for the purpose of free movement of air. When the designs have closed loops, like closed leaf or flower petal or any such loops, a through hole is drilled to avoid air traps and pulling of cloth with the dye during the design process. These through holes act as air vents to release the pressure of the pressed block. While with heavy slabs and intricate designs, transverse holes are made to relieve air pressure as well as some weight of the block. The blocks must be made of old or tempered wood. Alternatively the wood is first cut into slabs and immersed in water for some days to season it. It is then left to dry completely for six to eight months. The wooden slabs are cut into available in different shapes was used to achieve uniformity in design and to save time. These blocks are seasoned again after engraving by keeping them immersed in groundnut oil for 10-15 days, before they are completely dried, which provide them the softness required. This process makes the blocks stronger.

The surface is then smoothed with files and similar tools. The number of *ari* (saw), *shardi* or *kamathi* (drills), *kanas* (file), *tanknas*, *punches* and scrapers may vary from 25 to 30 procured from local blacksmiths. Japanese files are best suited for this work. The tools may be broadly divided into 4 types: drawing tools (*Guchyu*), impression tools (*tichaniyu*), carving chisels (*kalami*, *katni*, *thaso*, *golputhiya*, *chorasi* etc.), and testing tools (*ghasaniyu*). The slabs are polished by rubbing on a wet *khaara* stone, which is procured from Rajasthan. The surface is checked again and again with the help of a rule to ensure it is perfectly smooth and the process is known as *masarvu*. Even a slight roughness on the block will spoil the design when printed (Sabikhi, 2023). White pigment colour is then applied to the block. In an interview by Michele Archambault in 1989 on the eminent craftsman Sri.Trikamla Gajjar, it was stated that he rubbed the surface of the wooden piece using a file and then a smooth stone, sand and water. The second step was the chalk process where he covered chalk paste on the surface of the piece using his index and third finger. Then the wooden piece was allowed to dry in the sun. The chalk till date is made, as it was in the past, by a nomadic tribe, the Vanjaras by mixing it with gum (from the acacia tree).

The designs to be carved is drawn on it with a pencil or needle, always in double lines, and in the mirror image of the design to be printed and the slab is known as *kapla*. Knowledge of geometry is very important when drawing the designs on the blocks. The *rekh* is the main block for making outlines and *datla* or subsidiary blocks are used for different colours. The design is coloured to identify the difference between parts that are to be retained and those to be removed and discarded while the coloured part is the part to be retained (Census of India, 1961). The block is then carved with chisels, hand-drills, wooden mallets, etc. in 1.5 inch holes which are later connected as lines. Tools handmade by the craftspeople themselves are used to carve finer details on the block. This work requires a lot of patience and skill. Holes are drilled in the blocks to allow air bubbles to pass through so that colour and design does not get smudged while printing. *Chhado* or handles are attached. The block is now ready for use.

The specifications of block have been kept constant for centuries, keeping the end user in mind. The human hand can only hold block dimensions of 7×7 inches and 3×4 inches for a long

period of time, therefore the blocks created for constant use are made and are generally 3 inches high. The weight of the block is also taken into consideration as it cannot be too light or too heavy. This causes inconvenience during carving and irregular chipping during usage. It is possible that after carving the upper layers of the seasoned timber, there may be moisture in the inner layers of the timber. Moreover, since the carved blocks are to be dipped constantly in the colours and water, the blocks are immersed in the oil to prevent warping and damage to the fine designs (GUJCOST, 2017).

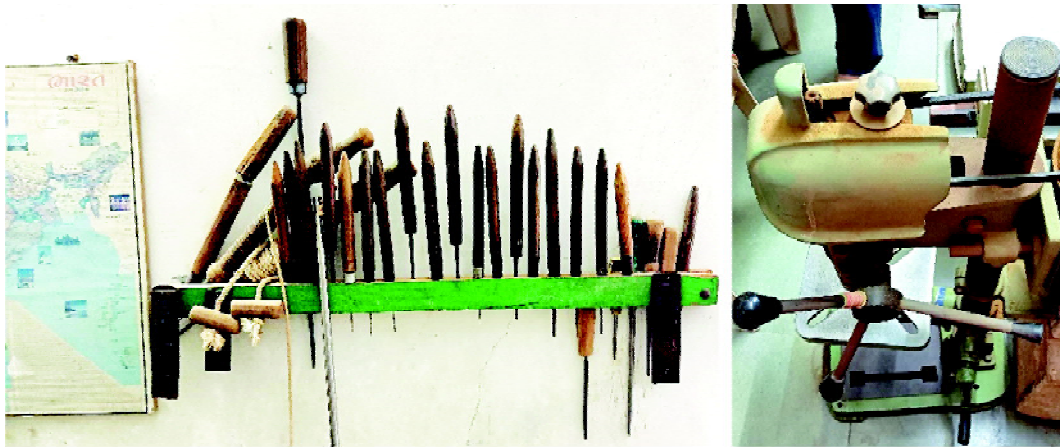


Fig. 1. Tools and polishing machines

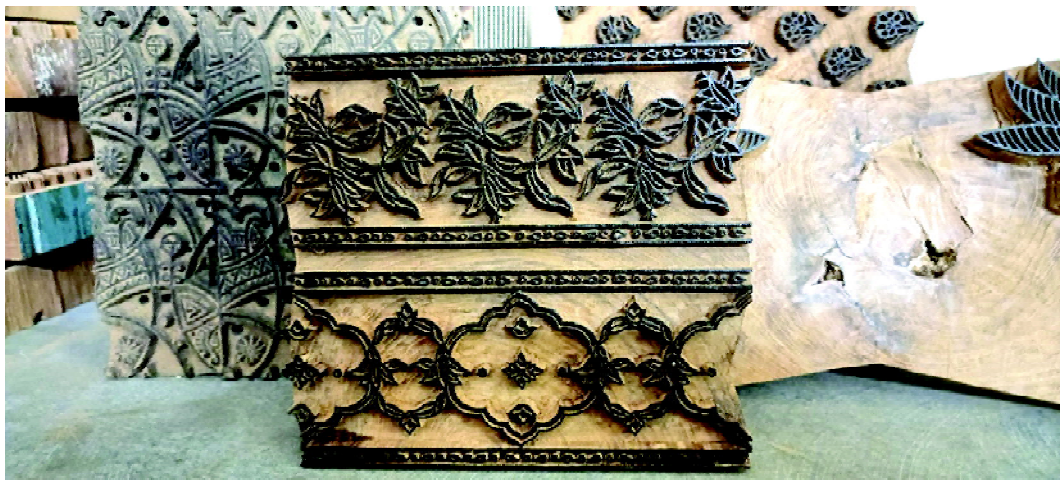


Fig. 2. Border designs by Mr. Mukesh Prajapati



Fig. 3. Designs are taken from their personal archives and sketched on wooden blocks



Fig. 4. Multi-coloured blocks are prepared separately as per the number of colours, (here it is black outline, red and green) as done by the sons Mr. Pragnesh Prajapati and his brother Avdesh Prajapati.



Fig. 5. The various printing blocks ready to be dispatched from their collection.



Fig. 6. Another finished product from the collection of Mr. Pragnesh Prajapati

Source: All photographs (Fig. 1-6) are taken by the authors in Pethapur, Gujarat on 06.09.2023.

Speciality of Pethapur

The art of block engraving was specialised by the Suthar artisans or the carpenter classes that spread to Pethapur in Gujarat, Mumbai in Maharashtra and Farukabad in Uttar Pradesh where textile printing developed. According to reports from the Gujarat State Government, Kalol, Rajkot, Ahmedabad and Jetpur were the other towns where block engravers settled.

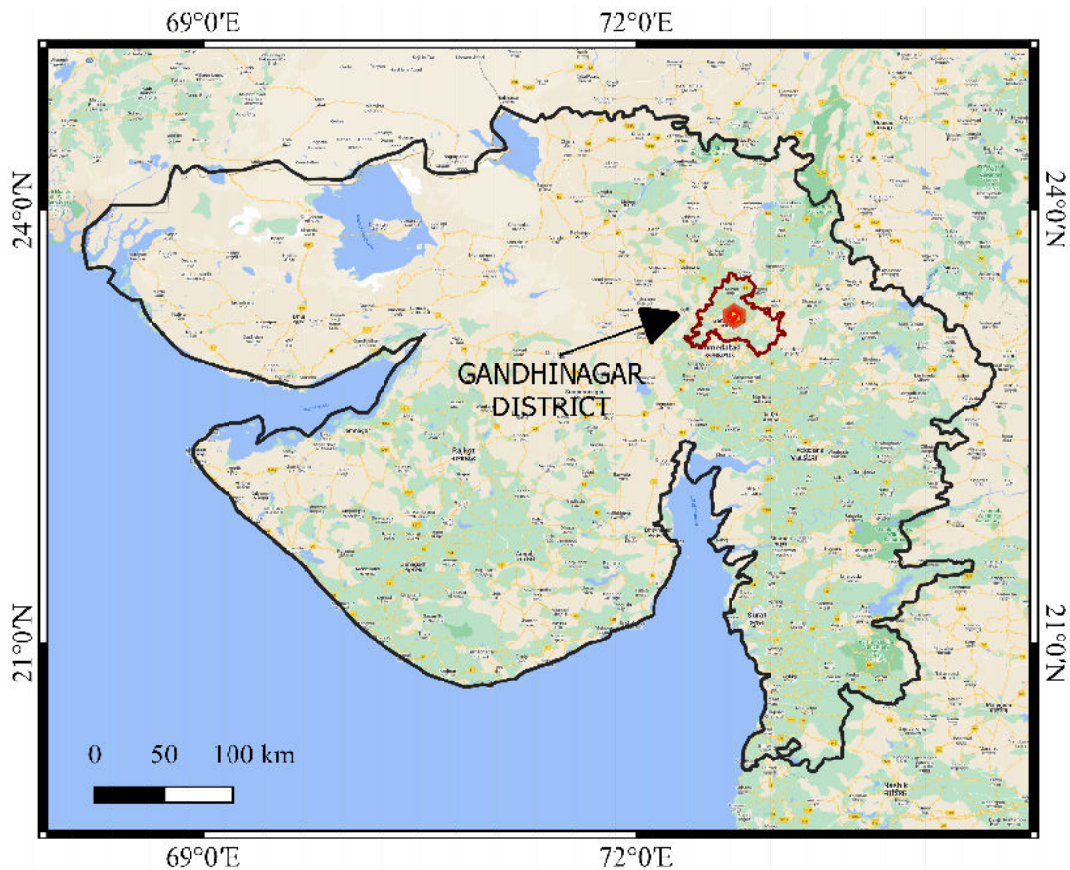


Fig. 7 Location of Pethapur Nagarpalika, District Gandhinagar, Gujarat. (composed by the authors with boundary as per Census of India 2011).

Pethapur village now a part of Gandhinagar District, was founded by a Vaghela Rajput, who after killing Pithuraj, his maternal uncle established his capital naming it Pruthupur about a thousand year ago which is now known to be Pethapur (Census of India, 1961). It was a centre for block-making for more than a few hundred years. It is considered a profession passed on

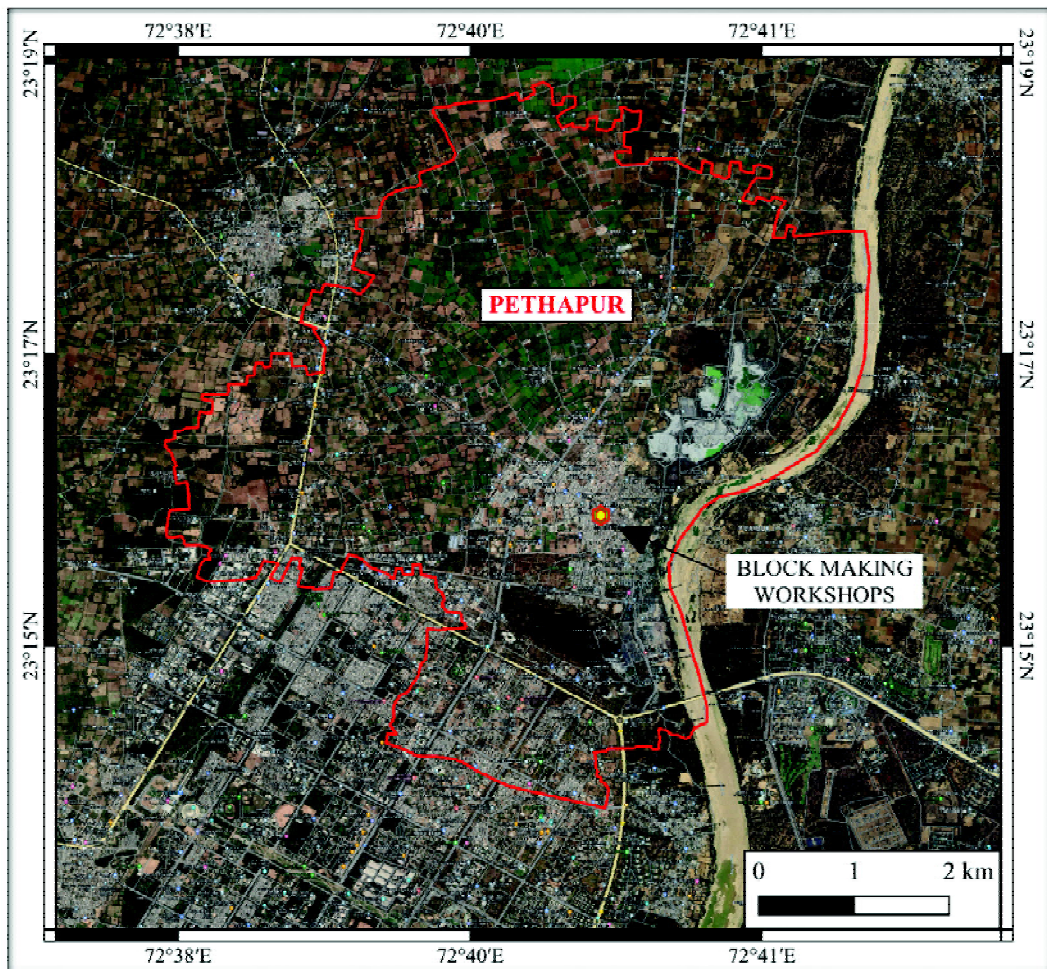


Fig. 8 Location of the predominant Printing Block manufacturing establishments in Pethapur

Source: GUJCOST documents, 28/08/2017

through generations of craftsmen. The profession gained importance and popularity early in the colonial period. During the Mughal times, almost all of Pethapur was brimming with block-making craftsmen. Even though the village suffered wars and invasions but their craft flourished under the patronage of Indian kings and the British. After the decline of the Saudagiri trade in 1940s, much of the work was taken away from the artisans. This indigenous industry received a great boost during the *Swadeshi* movement, the effect of which has also diminished over the years and many of them turned to other styles of block making in keeping pace with the changing needs. This led to each artisan mastering certain designs and styles.

Traditionally the Gajjar-Suthar (carpenter) community has practiced this craft. Shri Atmaram Pochalal and Maganlal Harchand are said to have received the first commercial orders for block making around 1910s. Haribhai Gangaram disseminated carpentry skills among the locals who later too were involved in block making, which then gave better returns. According to the craftsmen, one of the first few families in Pethapur to be involved in this craft was the Bhavsars, Gajjars, Prajapatis, Mistris, Patidars, and Thakors. The families were quite protective about their skill and would pass them on only to their direct descendants. The Bhavsars ended up changing profession, whereas the Prajapatis propagated the craft through their younger generations and also to willing artisans outside their families. Mention of a noted craftsman and national award winner Shri. Maneklal T. Gajjar in many articles have significantly brought Pethapur in the global craft map. Shri. Harjivandas of the Prajapati community learned this art from the Gajjar Mistris and became an expert. Later his son, Govindlal Prajapati, learned the skill from him and became a master in this art. He is now considered the best in India in the art of block making. Bagh printing, a dying art, was revived due to his consistent efforts. It is now a thriving centre with many people coming in, both curious visitors and those interested in textile design study. About 40 years ago 25 household units were operative each having 10 to 20 craftsmen and workers. According to 1961 Census, 122 household units having 132 workers in 25 establishments were recorded. Since 2017, 21 craftsmen from Pethapur are registered under the Geographical Indications of Goods Act 1999, in 4 establishments with only 2 or 3 skilled workers in each and very few have taken this as their full time profession. Of them, 4 are Gajjars, 15 are Prajapatis, and 2 Thakors. No women or children were ever engaged in this craft.

Saudagiri Printing developed primarily in Ahmedabad, and the production of the blocks would be done by the master craftsmen of Pethapur (Bhatia and Bhatt, 2017). They still maintain extensive collections of Saudagiri designs. The artisans involved in the carving of wooden blocks of Gujarat, Rajasthan, and Uttar Pradesh were believed to be influenced by the Kashmiri Muslim woodcarvers of Saharanpur (RUDA, 2011). As per interviews, the Block making sector in Uttar Pradesh mostly use Sheesham (Indian Rosewood) where designs are not cut very deep and can print only upto 500-1000 meters where as those in Gujarat all have reported to be able to print 2000-5000 meters from a single block.

There is a folktale associated with block making: several years ago the women of Pethapur village came up with an idea of putting patterns on their plain sarees. They dipped their bangles, pendants and rings in dye solutions and stamped them on these sarees. As the men in the area took to woodwork, and as they got to know about their unique way of printing; they carved those patterns on wood. Printers and dyers from nearby region also started coming to Pethapur for block making (Gaatha, 2023). It is stated that during the flourishing times, printing was done in Ahmedabad by a group of printers comprising the Muslim '*Chippa*' community and thirty Hindu '*Bhavsar*' families of Pethapur. Each printer specialized in printing a design or a particular set of them. A '*Khepio*' (messenger) would regularly travel on foot from Pethapur to Ahmedabad, carrying blocks along with special instructions to the printers and bringing back any specifications. The

ruler of Pethapur is believed to have granted farms to the craftsmen community as an aid that would help them during financial scarcity. This proved to be a boon for the craftsmen during the monsoon months, when printing work would come to a standstill. Cultivating the land served as a secondary seasonal occupation as well as a much needed source of income during a dry spell (Census of India 1961).

In the past there used to be about 300 people practicing this craft in Pethapur. But now the figure is dwindling as the younger generation prefers to pursue other occupations. These carved designs on the blocks are result of the artisan's skill and adeptness and possess quality and durability which was imparted into the blocks because of the way these artisans carve the design and treat the block after the design is carved. Carving a wooden block can take anywhere from a few hours to weeks or sometimes even months depending on the detail that is needed in the block (GUJCOST, 2018).

The blocks are sold to mostly the Chippa communities making Ajrakh, Batik, Sangneri, Kutchi, Bagru, Dabu, Bagh, and other pigment printers. Though it was very low in the last decade, when government recorded prices ranged between INR 50 and 125 per block, the price of a block can range from INR 1500 to INR 50,000 at present, depending on its size, the intricacy of the design, and the number of colours to be used in printing. Blocks are known by different names according to their function. These include the *rekh* block (used for printing outlines, sometimes with brass wires or strips attached in the grooves on the wooden block), *datta* block (to fill colours), and *gadda* block (to fill four colours). After every use, the blocks are washed properly and dried indoors completely to prevent them from getting damaged. If dried in the sun, the wet wood can crack.

At present no labour or workers from outside are hired. Sometimes interns come from various design universities like National Institute of Fashion Technology, M.S. University Baroda and others to learn the work for 1 to 4 days or these craftsmen are invited to deliver the lectures, however, no formal expansion of the craft is undertaken. No initiatives to form cooperatives have been taken till date due to lack of support system between the craftsmen. Local consumers avoid buying block-printed fabrics as they are expensive due to the hard work put into their creation. They prefer screen-printed fabrics as they cost less. Demand for block prints is higher in the international market, but there is now shortage of skilled artisans in Pethapur. To safeguard these skills and traditions, more products that make use of blocks should be designed and ways should be found to encourage more people to take an interest in and learn this art.

Pethapur Printing Blocks are produced by the artisans of a specific community, who solely owns the skill of selection and procurement of raw material locally, manufacturing of the tools according to the design need from locally available material, designing the motifs and colour combinations artistically, carving the design on the wood blocks to perfection, treating the finished blocks after production to sustain repeated use and exposure to water and dyes.

The Need for its Revival

This craftsmanship demands skill, precision, and expertise, which are typically acquired through years of training and practice. With the decline in the demand for traditional handicrafts, there is a risk of these skills fading away. Unfortunately, as modernization has led to the decline of traditional crafts in favour of more mechanized printing, these skills are at risk of being lost (Dewan and Bhat, 2018). It has the potential to create employment opportunities, especially in rural areas where traditional artisans reside. The revival of this craft can provide a source of income for weavers, carvers, and craftsmen, contributing to economic development and poverty alleviation. When local communities are actively involved in block printing, they not only benefit from the economic aspects but also gain a sense of pride and empowerment in contributing to



Fig. 9 The Logo and Certificate of inclusion as GI

their own well-being (Rahman et al., 2020). This can help reverse the migration of artisans to urban centres in search of alternative livelihoods. This can also have economic benefits, as block-printed textiles become desirable in global markets (Pande and Dabas, 2019).

Even though specifications of the cravings and traditional processes are continuing, a bit of technological advancements are being applied to the techniques. From the various interviews it was inferred that filing, smoothening, and polishing are now being done by grinder machines and mechanised drills. Today, they have more foreign endorsers who give them modern designs for block engraving. Yet, they still make the traditional blocks named *cherra*, *champakali*, *buta-buti*, *badam bota*, *kairi*, *jali*, etc. Smaller and less intricate blocks take about a day while those with more than bi-colour block or border-body printing combinations take about 5-7 days and are priced at INR 10,000 for the set of 4-5 multi coloured blocks. Specialised designs can take up to ten days and are priced even more depending on the intricacies. The craftsmen stated that if this craft could be revived, more skilled craftsmen can be included thus raising the profit margins. If

Table 1.

Application Number	585
Geographical Indications	Pethapur Printing Blocks
Status	Registered
Applicant Name	Gujarat Council on Science and Technology
Applicant Address	Department of Science and Technology, Government of Gujarat, Block-B, 7th Floor, MS Building, Sector-11, Gandhinagar - 382 011, Gujarat, India
Date of Filing	28/08/2017
Class	16
Goods	Handi-crafts
Geographical Area	Gujarat
Priority Country	India
Journal Number	108
Availability Date	05/07/2018
Certificate Number	328
Certificate Date	07/11/2018
Registration Valid Upto	27/08/2027

Source: Geographical Indications Registry, Intellectual Property India, Government of India. <https://search.ipindia.gov.in/GIRPublic/Application/Details/585>

such work are not given impetus in India they will very likely fade out in India while it might prosper in the European countries where there is a huge market.

Block printing is often associated with natural dyes and eco-friendly practices (The Guardian, 2021). The use of natural dyes, which are derived from plant sources, and the printing process itself are environmentally friendly. This stands in contrast to modern printing methods that often rely on synthetic dyes and have a more significant environmental footprint. The revival of block printing can promote sustainable practices in the textile and fashion industry. Consumers are increasingly conscious of the environmental impact of their purchases, and the demand for sustainable, ethically produced goods is on the rise. The revival of block printing aligns with this trend and can attract eco-conscious consumers (Verma and Panda, 2019).

Economic Development of Artisans

Recognition of the craft is the harbinger of economic development for the artisans. It is to be noted that these units are not registered workshops, and are done within their own houses. No organised trade, cooperatives or society have been formed which is a deterrent to collective business facilities, bank loans or compensations. Till today the craftsmen of Pethapur are not assisted financially by any organization and no assistance is available from the governments even from the Khadi Gramodyog Board nor the All-India Handicrafts Board. However, this has been exempted them from any type of income or business taxing and are ensured that the products used in the government block printing units and technical teaching institutions are procured from them.

The Geographical Indications (GI) tag on products indigenous to a region is one such approach to encourage ethnic art, food, and handicrafts to become economically gainful, thus improving their standard of living. Section 2(e) of Indian code states “that geographical indication, in relation to goods, means an indication which identifies such goods as agricultural goods, natural goods or manufactured goods as originating, or manufactured in the territory of a country, or a region or locality in that territory, where a given quality, reputation or other characteristic of such goods is essentially attributable to its geographical origin and in case where such goods are manufactured goods one of the activities of either the production or of processing or preparation of the goods concerned takes place in such territory, region or locality, as the case may be.” GIs play a significant role in preserving and promoting the handicrafts of India and to create economic opportunities for local communities, by generating demand for their skills and products. These indications are vital for protecting and enhancing the value of traditional handicrafts, while also contributing to economic development and cultural preservation. Artisans, often from rural areas, can market their products with a premium associated with their unique geographical origin, resulting in increased income and earn a sustainable livelihood. This, in turn, enhances their economic status and encourages younger generations to embrace and continue the traditional craft (Tripathi et al., 2020).

Often linked to the cultural heritage of a region, GIs provide legal recognition and protection to block prints associated with specific regions, which not only safeguards the cultural heritage but also offers various advantages to this industry. This recognition should have opened up new markets and export opportunities, benefitting the block print industry, and boosting the overall Indian handloom industry, however little advancements were noted from the various interactions with the craftsmen. GIs offer legal protection against unauthorized use and imitation of the identity or name of block print products and this was something that has now helped craftsmen to archive their designs and prevent counterfeit block print products, though no legal infringement cases have been noted so far.

Blocks from Pethapur are considered to be the best and earned the GI Tag No. 585 in 2017. GUJCOST has a Patent Information Centre (PIC) to support and facilitate the awareness, training, Creation and management of Intellectual Property Rights (IPR) in the state who had applied for the recognition. It was considered since “Pethapur printing block is an age old craft which involves great human skill and it’s a states resource which is currently dwindling and hence Gujarat Council on Science and Technology (GUJCOST) considers it as its objective to protect and encourage this craft and make it thrive in the coming days, thus protecting state’s resources as well as the interest of the people who are involved in the craft.” The Printing Blocks of Pethapur, Gujarat are designated under GI for several important reasons. This craft has a long history in the region, and has acquired a unique identity and significance, justifying its status (Registrar of Geographical Indications India, 2020). This emphasizes the strong connection between the craft and its place of origin, which is not replicated elsewhere. Here are some of the key reasons why the Printing Blocks of Pethapur, Gujarat have been granted GI protection:

- a) Pethapur has a rich history of block printing that dates back several centuries. This craft has been passed down through generations, making it an integral part of the region’s heritage and culture. They are known for their exceptional craftsmanship, unique designs and patterns that are distinguishable from those of other regions (Geographical Indications Registry, India, n.d.).
- b) The artisans in Pethapur use traditional techniques that have been preserved over time. These techniques involve using natural dyes and traditional wooden blocks to create the exquisite designs on fabrics. The use of these traditional methods adds to the uniqueness of the products (Registrar of Geographical Indications India, 2020).

Art forms, including block printing, can still spread and gain popularity without a GI tag, but the tags provide several benefits and can be appreciated for their aesthetic and cultural value alone (Nair, 2016). Absence of a GI tag does not necessarily hinder the promotion and spread of traditional arts as they are not limited by geographical boundaries or legal labels. The adaptability and innovation according to contemporary tastes can make traditional art forms more appealing to a broader audience (Bhattacharya, 2017). The cooperatives and NGOs can provide support and exposure to artisans, assisting them in reaching a wider audience (TRIFED, 2021).

Challenges Faced

Block printings are facing serious threats in today's rapidly changing world, with the advent of digital printing; and automated textile production has posed a significant challenge to traditional block printing. Modern printing methods are faster and more cost-effective leading to a decline in the demand for block-printed textiles. Block making is a craft that requires high levels of concentration and looking at the designs really up close. The printers stated that earlier people were not much concerned of the finer details and slight flaws present in limited quantity handmade products but now they demand standard quality having no imperfections for even mass productions bringing about a challenge in handmade consumerism. Block printing workshops often struggle to compete in a market, driven by efficiency and mass production (Nag, 2017). Contrarily, block printing has experienced limited technological advancements. The use of hand-carved wooden blocks and manual printing techniques, while traditional, can be laborious and less efficient compared to modern printing machinery (Dewan and Bhat, 2018). Block printing is labour intensive and demands long hours of physical effort and attention to detail.

All the work on the block is hand-done which is time consuming. The smoothening of the blocks cannot be done in factories since the heat applied would split the veins of the wood which is also done manually. In the effort that is taken to transfer an impression from block to fabric, even the tiny imperfections and variations created in the process create character and charm that is otherwise difficult to find. Even though the workshops of about 100-150 sq.ft. space are mostly located within their dwelling, lack of proper lighting facility is an issues. Constant pressure on the eyesight of the craftsman causes deterioration over time. They work from morning to early evenings, as this is when they can harness maximum natural light with less strain on the eyes. Other problems reported are back pain, constipations, muscle cramps etc. Many skilled artisans practicing block printing are aging, and there are few young individuals interested in pursuing the craft. As a result, there is a risk that traditional skills will be lost when the older generation retires (Vyas, 2021). The drudgery and pains in such crafts is deterring future generations from picking up the trade. Young individuals, in search of more lucrative opportunities in other sectors, are often drawn to urban areas. This migration leaves behind a shortage of skilled block printers in rural regions, where the craft is deeply rooted (Dewan and Bhat, 2018).

The appeal of block-printed textiles lies in their uniqueness and craftsmanship. However, the market is flooded with imitations produced using screen-printing or digital methods, diluting the value of authentic block-printed products. The low-quality of textiles, cheap chemical pigments, mechanised prints are lowering down the prices. Even with original block prints, fixed design orders prevent the block makers from trying out intricate motifs and making new slabs. The challenge is to educate consumers about the difference and the cultural and artistic value of the real craft (Jaggi, 2020). The globalization of fashion and design has led to instances of cultural seizure, where elements of traditional crafts, including block prints, are used without due credit or respect to their cultural origins. This can harm the authenticity and economic prospects of the traditional artisans (Bhatt and Shinde, 2017).

While block printing is often seen as a sustainable and environment friendly process, there is an increasing awareness of the environmental impact of textile production as a whole. The use of synthetic dyes and excessive water consumption in some block printing regions can be detrimental. The craft needs to adapt with more sustainable practices to remain relevant in the context of environment (Verma and Panda, 2019).

Finally, ensuring fair wages and proper working conditions for block printing artisans is a critical concern. The revival of the craft should prioritize ethical treatment and compensation for the workforce (Rahman et al., 2020). To compete in the modern market, block printing artisans require support in terms of market access, branding, and promotion. Often, traditional artisans lack the resources and knowledge needed to reach wider audiences, both domestic and international. Strategic marketing and promotional efforts are crucial in this regard (Dewan and Bhat, 2018). It may be mentioned that, in response to these challenges, various government and non-government organizations have to initiate programs to support the revival of block printing technology.

Future Prospects

The future prospects and opportunities for block printing are promising, especially as there is a growing global interest in indigenous art products. Popularizing block printing among rural population in India can be an effective way to preserve traditional art forms, empower marginalized communities, and contribute to economic development. An inclusive craftsmen community, especially promoting the youths with all necessary support can boost Indian crafts to the highest possible level. Even though in Uttar Pradesh, women actively participate in block manufacturing process, in Gujarat this is not prevalent. On the part of both governmental or NGOs opportunities for training centres or workshops in backward regions to provide artisan training in block printing techniques should be undertaken. Enhance skills of other communities who are willing to take up this craft through partnering with organizations like the National Institute of Fashion Technology (NIFT) or the National Institute of Design (NID) need to offer skill development programs (Kumar and George, 2018), for bringing in more such crafts, process and designs towards obtaining GI status to increase their marketability and protect their authenticity to attract consumers (Registrar of Geographical Indications India, 2020).

Another way for supporting the craft is by creating market linkages for artisans by connecting them with urban and international markets through craft fairs, exhibitions, and e-commerce platforms and establish cooperative societies to help artisans collectively market their products. Online trade of original block printed products must be endorsed so that block makers are promoted. Expansion of self-help groups among artisans to facilitate collective production and marketing (Ministry of Tribal Affairs, GoI, 2020). These groups should be able to access financial support through government schemes like the “Stand-Up India”, “Make in India” and “PM Biswakarma” initiatives, which aim to promote entrepreneurship and local manufacturing for income generation.

Artisans should be encouraged to experiment with traditional designs and adapt them to contemporary fashion and home decor (Vyas, 2021). Research and documentation of block printing traditions to preserve their knowledge and techniques for future generations can serve as a valuable resource (Dewan and Bhat, 2018). By implementing these strategies and initiatives, rural block printing can be popularized, contributing to community development, preserving cultural heritage, and fostering economic development. These efforts are essential for ensuring the continued prosperity of rural artisans to sustain traditional crafts.

Conclusion

Block printing holds a significant place in the cultural heritage of many regions. The intricate designs, patterns, and motifs used in block printing often reflect the unique cultural and artistic traditions of a particular area. They are not merely artistic expressions, but deeply rooted in the history and identity of these regions originates as well as showcasing the deep connection between nature and culture (Kapoor, 2019). Reviving block printing is crucial to preserve these tangible representation of cultural identities and ensure that the heritage of the craft continues to be passed down through generations. It is essential to ensure that these skills are passed on to the next generation and also presents an opportunity to train and educate young artisans in the traditional techniques, preserving the craftsmanship that makes block printing so unique (Dewan and Bhat, 2018). The recognition and promotion of these products can help preserve the cultural identity of the regional culture. Some GI-tagged product initiatives may include training and capacity-building programs to enhance the skills of artisans and producers, which can be open to individuals interested in learning these skills. Essentially, awareness programs and exhibitions at the local and national levels will educate consumers about the cultural and historical significance of block printing traditions and the importance of supporting traditional crafts and marginalized communities is the need of the hour especially in a country like India (UNESCO, 2003). Survival of this craft solely depends on the demand for handmade block printed products in national as well as global markets hence promulgation of block manufacturers must be taken up to give recognition to the craftsmen.

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