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Author's :

Dr. Malyaj Gangwar

Director of Design & Operations,
Sheril Exports Pvt. Ltd., Sanganer, Jaipur,
Rajasthan, India.

Corresponding Author :

Dr. Malyaj Gangwar

Director of Design & Operations,
Sheril Exports Pvt. Ltd., Sanganer, Jaipur,
Rajasthan, India.

Ply-split braiding : An Endangered Craft of the Rabari Community

ABSTRACT

Textiles and adornments fulfil practical and aesthetic roles in human culture, extending beyond personal use to include decorative elements for domesticated animals as well. In Rajasthan's Thar Desert, the Rabari herders have preserved an ancient craft of camel decorations without looms. This unique craft, known as ply-splitting, involves cords made from goat and camel hair to create decorative straps that hold deep cultural significance for the Rabari people. Today, industrialization and changing interests among younger generations have caused this craft to decline, with only elderly artisans keeping the tradition alive. This study investigates the current state of ply-splitting around Jodhpur, documenting its cultural significance and challenges. By engaging with remaining practitioners, the research highlights the urgent need for preservation strategies to safeguard this vanishing heritage craft. For this study, primary data were collected through field visits and interviews with the Rabari community in the Jodhpur region, supplemented by secondary sources, including books and articles. The research aims to document the technical aspects and historical evolution of ply-split braiding—from its origins to contemporary times—while raising awareness among craft enthusiasts about this unique textile-making tradition. By highlighting its cultural and artisanal value, this study underscores the urgent need for preservation efforts to prevent the extinction of this craft.

Keywords: Cultural heritage, Endangered craft, Non-loom textiles, Ply-splitting, Rabari community

INTRODUCTION

The Rabari are a semi-nomadic community in Rajasthan at present (Social Justice & Empowerment Department, 2023, p. 141). Traditionally, they were fully nomadic camel-breeders who moved from place to place for their livelihood and in search of pastures for their camels, sheep and goats. This community is quite artistic in nature, traditionally Rabari men were fully skilled in ply-splitting and women in hand embroidery. They used to utilise their skills not just for adorning themselves, but also they started to adorn their camels by hand-crafted trappings for various usage including the *tang* (camel girth), the *gorbandh* (necklace), the *godiya* and *sariya* (ankle and knee bands) and the

morka (bridle) (Ranjan & Ranjan, 2007, p. 115). Bags hung from the saddle were known as *khurji*. The Rabaris used to create ply-splitting entirely for their own needs, not as a commercial craft (Edwards, 2011, p. 108).

Unlike textile methods based on interlacing, interlocking of loops, or twisting of threads, such as weaving, knitting, or macramé, ply-splitting is defined by its unique action: separating the plies of one cord and passing a second cord through the gap between the plies of the first. The villagers of Western Rajasthan in India are particularly adept at making camel girths using this technique (Gillow & Sentence, 1999, p. 61). Traditionally the technique was used to make girths and other decorative accessories by using 4-ply cords either made of cotton or goat hair for their camels. Braiding is characterized by the interworking of a set of cords through crossing, interlacing, interlinking, twining, and intertwining (Speiser, 1983, p. 146). In ply-split braiding, cords move through each other i.e. twining and intertwining. Pattern or form or shape of any object is derived from both the color and the order in which they are arranged and manipulated. The correct placement of splittee or splitter is the key point of the possibility of any desired design.



Fig. 1 — A camel decorated with ‘Girths’ made of Ply-split Braiding

Photo courtesy: <https://pin.it/3N2I5JVU5>

Being an off-loom technique, ply-splitting facilitates the construction of both simple and complex forms, from flat bracelets to large vases and sculptural pieces (Hedges, n.d., para. 4). As rightly said; Sky is the limit, keeping in mind the technical aspects anything can be created by ply-splitting, from a flat braid to three-dimensional structures. All that is required is some cords, a gripfid and a masking tape.

HISTORY- EMERGENCE OF THE CRAFT

Ply-split braiding, a simple and easy way to create decorative items historically/explicitly is emerged by the Rabaris. This is a nomadic community resides scattered predominantly in Rajasthan and Gujarat in India. Initially nomadism was deeply rooted in the community as in local language ‘Rabari’ word itself means the one that has gone outside (dwells outside). The origin of the Rabaris or Raika tribe is steeped in mythology. It depicts the relation of Lord Shiva with Rabaris, a tale which narrates about his incarnation. It says that the first camel was created by Lord Shiva in order to amuse his consort, Parvati, and to take care of the animal he created the first Rabari (Kohler-Rollefson, 2014, p. 45-46).

Origin or documented history of ply-splitting is not available, but the existence of articles in the form of a typical zig-zag pattern of braided harnesses and girths can be seen in the miniature paintings of western India, especially in depictions of the popular Rajasthani folk tale of Dhola and Maru, the lovers who eloped on a camel. Abu’l-Fazal has also mentioned the article made of ply-splitting among the objects in the imperial storehouses of the Emperor Akbar (Edwards, 2011, p. 108). It can be said that the craft took place due to lifestyle and affection of the Rabari community to their cattle- especially camels. Almost all fiber artists have accepted and noted in their documents that the technique has been found and most fully developed in Rajasthan and Gujarat region of India and the technique was used to create camel girths and animal regalia- an indication of royalty.

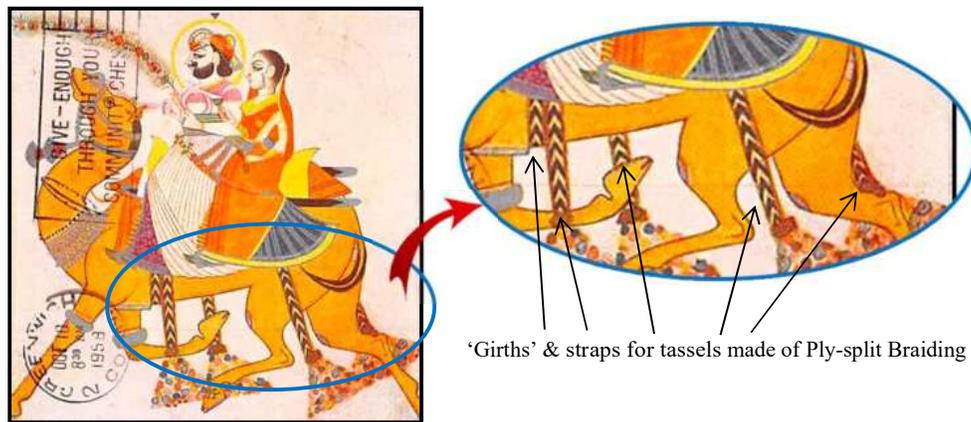


Fig. 2 — Dhola Maru, Rajasthani School India Postcard 1958

Photo courtesy: <https://www.hippocard.com/listing/dhola-maru-rajasthani-school-india-1958/6550139>

Mr. Mularam, a 76-year-old Rabari man from Salawas, Jodhpur, says, “Being believers of Lord Shiva, Rabaris have always respected the gift given by God to them. Adorning camels is not just about decoration, but a way to thank God for blessing them with an animal that can survive the harsh climatic conditions of the Thar Desert of Rajasthan.”

The craft was traditionally practised more by men and the designs created by them were highly patterned, featuring geometrical shapes and embellished with cowries, buttons, tassels, coins, etc. They used to change the girths and accessories of camels as per different occasions. Despite of the fact they were much inclined towards their flock of camels and goats they managed their time to practice and embrace this art.

The beauty and technical aspect of ply splitting have been barely noticed by anybody ever before the visit of Peter Collingwood to India. In 1980's while travelling in India he collected artefacts made of this technique to explore and research it. He culminated all of this data and compiled it in a book form “The Techniques of Ply-Split Braiding” published in 1998. Lectures, workshops and demonstrations given by Peter in various countries brought the technique to a wider audience. In 1976, a monograph on "Split-Ply Twining" by Virginia Harvey, appeared as a first written description of the technique (Harvey, 1976). "The Ply-Split Camel Girths of West India" published in 1982 is considered as first detailed document of ply-splitting containing whole traditional process, including spinning, plying, cord making, and three structures of ply-splitting. These were SCOT, plain oblique twining (POT) and two-layered oblique interlacing (TLOI). This research work was of two graduate students from UCLA conducted in 1974 and 1975 in Rajasthan and Gujarat of India (Quick & Stein, 1982). The technique remained largely unrecognized among the art and craft passionate but the book “The Technique of Ply-Split Braiding” by Peter Collingwood published in 1998 was a milestone in the journey of Ply-splitting as it made fiber artists aware of the craft.



Figure 3 — A Rabari man with his creation of Ply-split Braiding

Photo courtesy: The author

PLY-SPLITTING

Material used

The technique requires little equipment- a hollow needle-like tool known as gripfid to pull the splitter-cord from the twists of splittee-cord and masking tape to secure the cut ends of cords. Traditionally *gunthaniya* made of wood was used as gripfid.

The high twist cords are essential for Ply-splitting. In olden days these were found in abundance as it was a routine activity of the Rabari men. But now high twisted cords are not readily available to buy, so it is usual to make own cords with the help of a cord winder. Ply-splitting necessitates a multiply yarn structure, typically utilizing two to four plies. Historically, this technique produced animal girths from handspun, four-ply goat hair cord, employing a classic palette of black and white. Contemporary applications feature diverse materials, including cotton, linen, silk, and synthetic fibers with color selection being entirely design-contingent.



Figure 4 — Material used in Ply-splitting

Photo courtesy: The author

Although specialized tools such as the *gunthaniya* or gripfid are sized for specific cords, the technique can be performed without them by stiffening the cord's tip for about half an inch.

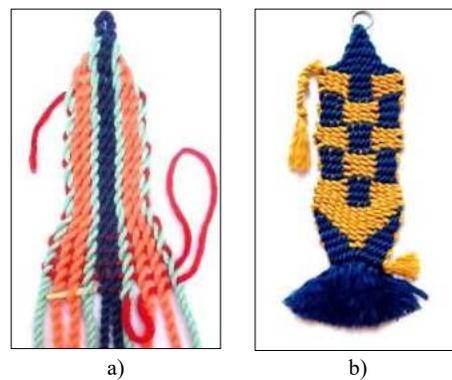
The structure : Ply-split Darning and Ply-split Braiding are the two basic techniques of ply-splitting.

1. Ply-split Darning (PSD)

It is something like plain weave of making woven fabric- two sets of cords work in warp and weft relationship at right angles. However, instead of passing over and under to each other, in ply-split darning the warps work as the Splittees, the weft as the Splitter or danner. Traditionally, in PSD, the splitter always remains the same, so the color sequence does not change. In the resulting structure, only the warp cords are predominantly visible, whereas the weft cord is visible only at the edges or selvedge. The 'weft' or the splitter needs to be longer than the other cords and can be much finer (Hedges, 2016).

Possibilities within PSD

The scope for design exploration is limited. Although the single splitter can also function as a splittee, this technique can only be executed vertically or horizontally, not diagonally. The resulting structure



- a) PSD: A single 'weft' cord (in red) passing from 'warp' cords
 b) Possibility within PSD: Beyond its role as a splitter, a single 'weft' cord (in yellow) also functions as a splittee in a sequence

Figure 5 — Ply-Split Darning (PSD)

Photo courtesy: The author

produces a checkered effect. Other possible variations include color combinations, thickness, and the twist direction (S or Z) of selected splittee cords. While the number of splitters can be increased to expand possibilities, they remain visible only at the edges. A tubular form can also be created using PSD.

2. Ply-split Braiding (PSB)

Peter Collingwood provided the fullest description of traditional textiles made by ply-split braiding and of the techniques used to make them. In ply-split braiding, the elements move in the same way as in other braids—following an oblique path. They first run along one diagonal, such as the ‘S’, then shift as the selvage to the opposite ‘Z’ diagonal, continue to the other selvage, and return again to the ‘S’ diagonal, repeating this process (Collingwood, 1995, p. 47).

At each point where a cord on one course meets another cord on the opposite course, one splits the other and passes through it. So at each point, there are only two possibilities; either the right-hand cord can split the left-hand, or the left-hand can split the right-hand.

Variations in sequence of splitting, colors, thickness, textures and number of plies of cords provide a unique output. Ply-split braiding has been usefully divided into three structural types, depending on the sequence and correct placement of cord for splitting each other.

- **Plain Oblique Twining (POT)**

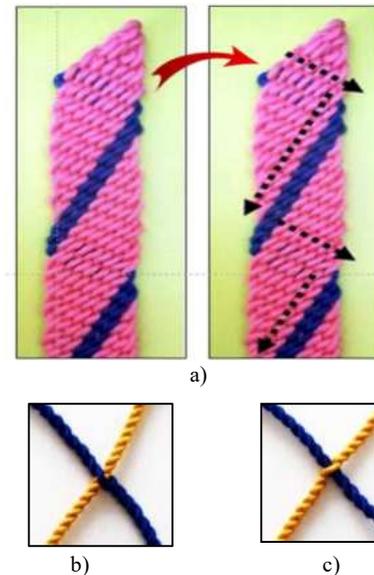
Each cord alternately works as a splitter and splittee for each successive cord it meets along its path. The most special characteristic of POT is that if the eyes trace a single cord through the braid, the cord appears in one row (where it is split) but is completely hidden in the next (where it is the splitter). It looks like the interlacement of plain weave, henceforth has name ‘Plain Oblique Twining’.

- **Single Course Oblique Twining (SCOT)**

Single Course Oblique Twining is the simplest form of braiding. It depends on two principles-

1. A cord works as a splitter and/or splittee for more than one (or several) cord it meets along its path.
2. The splitting is always done on an oblique fell, not a transverse one.

The formation of S and Z twist/design is seen. SCOT is the most widely used technique of ply-splitting among the fiber artists as it has various variations- Diagonal stripes, wavy effect, chevron braid, 3D work and many more.



- a) SCOT. A cord is moving diagonally
 b) Right hand cord splits left hand cord
 c) Left hand cord splits right hand cord

Figure 6

Photo courtesy: The author



Figure 7 — In PSB (POT), each cord alternately splits & is split by each successive cord it crosses.

Photo courtesy: The author

In both POT and SCOT techniques, the color of all plies in a cord is always same, although there are many possibilities of having cords of different colors, as per the design requirement.



a) Diagonal stripe

b) Chevron braid

c) Star shaped Waved braid

Figure 8 — PSB (SCOT)

Photo courtesy: The author

- **Two Layered Oblique Interlacing (TLOI)**

In a two-layer oblique interlacing (TLOI) a 4-ply cord with two adjacent plies of one color and two of a contrasting color is used. Like the POT structure, the cords alternately function as splitter and splittee, however unlike POT, in TLOI the cords rotate either a half turn or not at all between successive splittings. In TLOI, the color depends on whether the split cord had no twist or a half twist since its immediate prior splitting; in the former case, the same color appears on the surface as previously, whereas in the latter case the contrasting color appears (Fraser, 2010, p.1).



Figure 9 — Both sides identical motif in TLOI

Photo courtesy: The author

However, in TLOI, cords may rotate either half a turn or not at all between splits. If a cord has not twisted since the last split, the same color appears on the front surface; if it has rotated half a turn, the contrasting color appears. TLOI offers great scope for making geometrical figures under ply-splitting. A significant feature is that however complex the figure, it always appears identical on both sides—one color on the front and another on the back. As the name TLOI itself suggests, layers are formed in the process. In ancient time Rabaris used to manipulate these layers into pockets on a girth to hide their valuables from strangers while living their nomadic life (Collingwood, 1996, p. 48).

3-D Effects

After becoming popular among fiber artists around the world, the craft technique has been mostly used in creation of three-dimensional forms. Artists are using variety of cords and combination of all possible structures of ply splitting to give shape to his/her imagination. Artists are creating symmetric vases to abstract 3-D forms.

Contemporary world

Today, the ply-split braiding technique is used by fiber artists to create handcrafted decorative items including neckwear, bags, straps, vases, garments and three-dimensional abstract structures. There are many artists who are using this craft in a brilliant way and are well known for their works not only in India but also in foreign.

Peter Collingwood is a renowned fiber artist, famous for his authoritative books on textile crafts like ply-split braiding. Similarly, Erroll Pires, a former faculty member at the National Institute of Design (NID), has dedicated over 30 years to mastering the craft. He began with traditional items like camel girths & belts and has since progressed to creating innovative 3D sculptures and seamless dresses, elevating the craft to new heights. He learned the technique from the late Ishwar Singh Bhati, a traditional practitioner from Jaisalmer. Another key artist, Julie Hedges from the UK, is also working to popularize ply-splitting worldwide.



a) A Vase (Theme: Save Water)



b) A flower- Lotus

Figure 10 — 3 D Creations

Photo courtesy: The author

The Office of the Development Commissioner (Handicrafts), an attached office of the Ministry of Textiles, Government of India, took an initiative in 2017 to promote the craft and its artisans by including it in its list of endangered crafts. In 2024, the same office took an initiative for the revival of the endangered craft of ply-split braiding. The author was part of this project as a designer.

The Braid Society, an online organisation was founded in 1993. The aim of the Society is to promote the education and practice of the art and craft of making various kinds of braids and narrow bands. Along with other various braiding technique ply-split braiding is a part of working technique of this society.

Some other fiber artists who are renowned for their dedication in ply-split technique around the world are- Virginia Harvey, Barbara J. Walker, Ann Norman, Jennie Parry, Noemi Speiser, Linda Hendrickson, Kay Seimachi, James Pochert, Akiko Shimanuki and many more. Having a keen interest in this craft, me being a teacher of fashion designing is practicing this craft and spreading this technique to my students at my institute.



a) Neck piece with a pair of earrings

b) A pair of Slipper

Figure 11 — Functional as well as decorative contemporary products

Photo courtesy: The author

CONCLUSION

The essence of this craft is getting faded away with time. Keeping pace with the modern world, Rabaris are giving up their nomadic life. Today, most of them have settled down permanently in one place and are engaged in various other occupations which have no concern with their original traditional life. Due to growing urbanization and introduction of machinery the onset of speedier production is growing and instead of promoting or practicing this craft person rather think who would want to make something that takes so much amount of time. In modern scenario of today this craft has not much relevance to the lives of Rabaris, accessories for cattle are readily available in the market.

The younger generation has no idea even about the existence of this craft and the craft is dying with the older generation. Fiber artists are exploring the craft, but it has been limited to them only. We need to ensure that the craft lives in this modern world and everyone living here must know about this craft.

Design institutes, Indian government under the Ministry of Textiles (Handicrafts), private organizations like 'The Braid Society' and some Facebook groups are trying to work in order to spread this craft essence but the craft has not reached the stage where it should be. Henceforth, this craft needed to be protected and even practiced more and more so as to keep the essence of older generation alive.

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