

Journey of double cloth across the globe

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ABSTRACT

Fabric is one of the basic necessities of a human beings. It has been produced and has evolved as per the requirements of human comfort, situations and purposes. To satisfy these needs of consumers, textile industry works day in and day out. The industry is bifurcated in two sectors namely handloom and powerloom. Handloom industry is creating many documented and undocumented traditional fabrics from across the globe, which are being produced from generations by generations of weavers. This paper talks and introduces the construction about one such traditional handloom fabric called Double Cloth and Cloth and also traces the difference between the double cloth and the single cloth. As there is an empirical study available on double cloth therefore the paper traces the application of double cloth technique and its products from Peruvian textiles to its present day creations. This through a journey coverings many countries around the globe including India.

Key Words : Weaving, Loom, Double Cloth, Warp, Weft

INTRODUCTION

Varieties of fabrics are produced by handlooms. One of the major classifications of the fabrics produced on handloom is Single Cloth and Double Cloth, which is based on their construction techniques and layers. Though the basic process of fabric construction is same in both, the latter have more than one layer woven simultaneously as a face and a back layer in one fabric. Thus, the single cloth has only one set of warp and weft threads while double cloth includes supplementary warp and weft threads. In the category of double cloth, the additional elements can be in the form of extra warp or weft threads (Hann and Thomas, 2005).

Double cloth construction :

A double cloth as stated earlier, is composed of two layer fabrics, from two sets of warp and two sets of weft yarns, woven simultaneously as one composite fabric (Moore, 2000). Occasionally the two warps may be fed into the loom from separate beams, but more often they are combined on one beam. Double-cloth construction permits fabric to be made where the face and back are different, either in terms of surface texture or color. Many writers and authors have also termed double cloth as compound weave or compound structures.

The process of creating double cloth remains the same as of the single layer fabric construction, with the only difference of employment of minimum four harnesses in its creation. Two harnesses for developing face layer and another two for creating the second or back layer. The technique of weaving

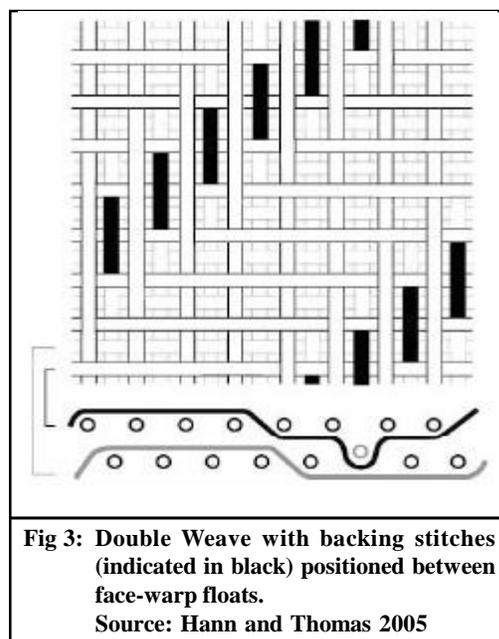
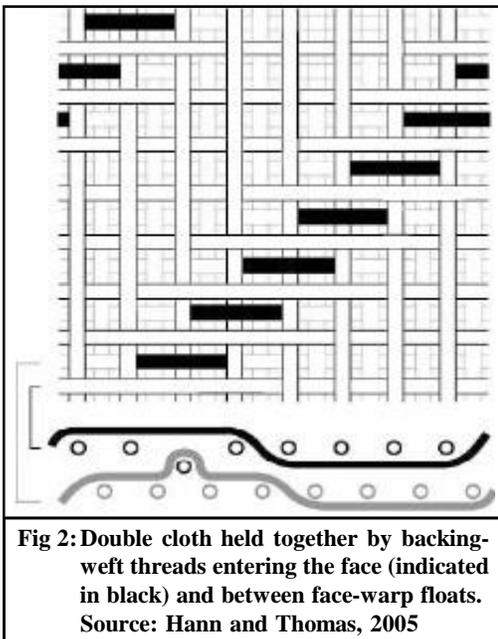
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is similar as single cloth for creating face and back layers. There is only one most important consideration kept in view while developing a double cloth which is to keep all the warp yarns of face layer up while inserting the weft for the formation of back layer. The lifted warp yarns of the face layer along with the back layer enable the warp of face layer to interlace with the warp of the back layer (Hann and Thomas, 2005).

Double cloths can be categorized into three classes, based on how the two components are held together:

- *Self-stitched double cloths*: Self-stitched double cloths rely on selected threads from the back cloth or face cloth interlacing (or stitching) at discreet intervals into the face cloth or back cloth respectively.
- *Interchanging double cloths*: Interchanging double cloths have two sets of warp and weft yarns which swap position at selected intervals, thus allowing each set to create the face of the double fabric on some occasions and the back of the double fabric on other occasions.



– *Centre-stitched double cloths*: Centre-stitched double cloths are held together by stitching threads, running warp-ways between the two cloths. These stitching threads interlace alternately (and discreetly) in the face and back cloths.

Each of these mentioned three classes of double cloths was explained by Moore in his readily understandable review of basic weaves (Moore, 2000i, j & k).

History of double cloth fabrics from around the globe:

The handloom industry around the globe has been creating single and double cloths from centuries. The creation of single cloth had been and is still a traditional craft of many civilizations across the globe, while weaving of double cloth is losing its identity and technique to the present growing demands of single layered fabric in the textile industry. The double cloths were developed in few regular designs and for particular purposes in various countries in the earlier periods. Therefore

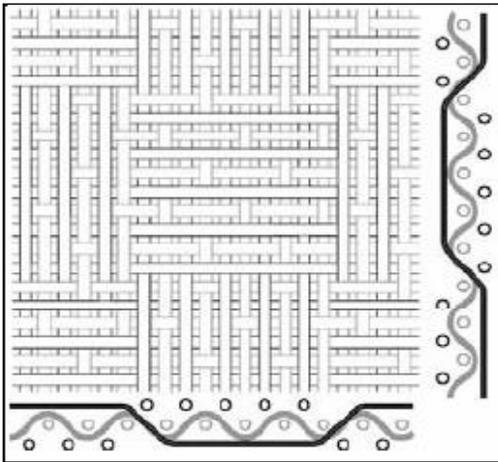


Fig 4: Interchanging double cloth structure
Source: Hann and Thomas, 2005

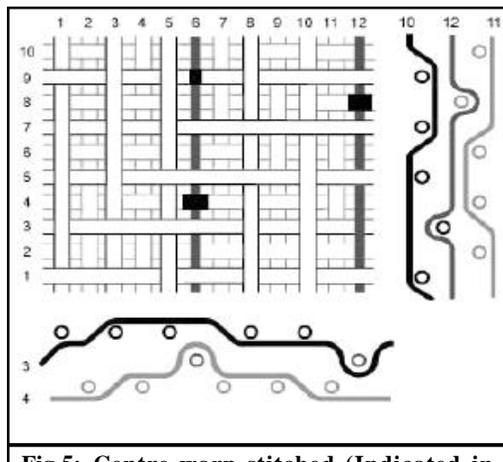


Fig 5: Centre-warp-stitched (Indicated in black) double cloth structure
Source: Hann and Thomas, 2005

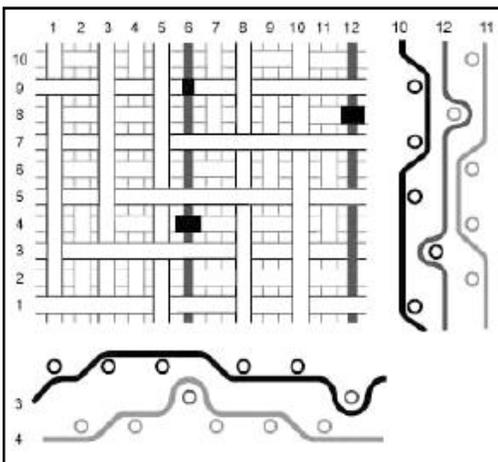


Fig 6 : Centre-weft-stitched (Indicated in black) double cloth structure

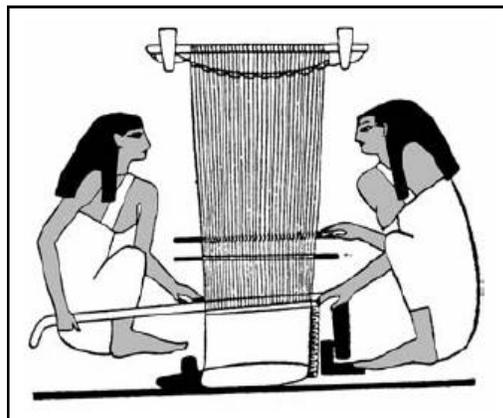


Fig 7: Drawing of weavers at horizontal ground loom. Derived from mural in tomb at Beni Hasan, Egypt, c.1900 BCE
Source: Hann and Thomas, 2005

a mapping of the history of double cloth is done to show that how the craft developed and travelled across the globe.

– Peruvian textiles :

The origin of double cloth can be traced to ancient Peruvian textiles. In Peru, Inca and Pre – Inca civilizations, people used to bury their personnel belongings with their mummies in their tombs. Maximum treasures have been collected through excavations of these old tombs belonging to the above mentioned periods. The artifacts so collected from these tombs showed examples of embroidery, tinsel, leno, brocades of highly intricate patterns, double cloths and hand knotted nets. These fabrics and samples demonstrated the fine weaving skills of the weavers during that era.

The earliest known example of patterned double cloth was found in Peru, and is dated to the Paracas Cavernas period, 850–300 B.C. (Mason, 1968) and a similar cloth was represented from pre-Columbian epoch also (d’Harcourt, 1962). A silk woven fabric with three layers (triple cloth) was found from the tomb of bishop Hartmann buried in the Cathedral of Augsburg in the year 1286 B.C. (Muller-Christensen, 1985) and a very fine example of a Persian double cloth which is a silk fabric in red and white, brocaded with gold thread dated to the year 1600 B.C. has also been recorded (Geijer, 1979).

Also, the book *Ancient Peruvian Textiles* (Thames and Hudson, 1987) has a description of the pattern developed on the Central Coast during Early Intermediate period (200 B.C. – 500 A.D.) which used an interlocking style. The patterns used geometrical motifs for weaving in which different colors appeared on both the sides of the fabric, which results due to the usage of double cloth technique with a face and a back layer of different colors.

The book also mentioned that in Late Intermediate Period (1000 -1470 A.D.), the weavers of Chancay Textiles mastered their craft in creating double cloth along with other handcrafts. Similarly, *Studies in Peruvian textiles* paper described about a double cloth fabric piece displayed in Victoria and Albert Museum, England belonging to Non Incan Period found from graves of Lima of 14th Century (Bunt, www.cs.arizona.edu).

However an article, *Weaves in handloom fabric* showcased a fabric piece that was developed before 1134 A.D. to prove that the double cloth’s history is very old and ancient which occurred even before Incas period (Reath, 1926).

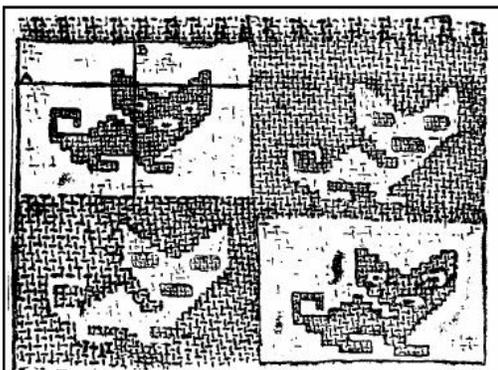


Fig 8: Double cloth fabric piece displayed in Victoria and Albert Museum, Non Incan Period found from graves of Lima of 14th Century
Source: Bunt, www.cs.arizona.edu

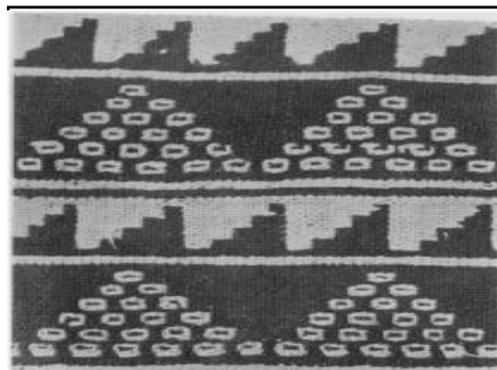


Fig 9: Section of a Poncho, double compound cloth of cotton Peruvian, Pre-Inca Period (before 1134 A.D.)
Source: Reath, 1926

–Scandinavia:

From Peruvian textiles let's now move on to Scandinavia where the earliest example of double cloth belongs to 13th Century and were found in Northern Sweden and Norway. The double cloth in Scandinavia was produced in two forms one as pick-up double cloth and another as non-reversible pick-up double cloth.

Pick-up double cloth :

The term *dubbelvavin* is used in Scandinavia which represents the pick-up double cloth. Pick-up double cloth was widely woven as a folk art in later centuries in Finland, Norway, and Sweden. The raw material used was hard spun wool for one layer and unbleached linen for the other. In some cases wool was used for both the layers. The earliest of the preserved double cloths in Scandinavia was woven with same number of threads on both the sides and with same patterns. The only difference between the sides was that the colors were reversed (Becker and Wagner, 2009).

Non-reversible pick-up double cloth:

Non reversible pick up double cloth were created by professional weavers in 14th and 15th century. The design inspirations were taken from imported Italian silk or Spanish silks. The major characteristic of these fabrics were that the patterns on the face of the fabric were more prominent than the back. While on the reverse side of the fabric, patterns missed minute details and they didn't have much clarity. An example of non-reversible pick-up double cloth is a very beautiful hanging of the 15th century preserved from a Swedish church, woven with blue and white wool (Geijer, 1979).

– American coverlets:

As per encyclopedia of American Art in 18th and 19th century weaving was considered as an art form and was practiced at homes and as well at professional levels in America. The woven coverlets of single and double cloth, consisted of mainly geometric and figured designs with mostly white and blue color in that period. The multiple harness looms, helped the weavers to create figurative designs in weaving. However at home majority of weavers had simpler looms and therefore largely geometric designs were created at home. The earliest sample of blue and white color float-work coverlet belonged to 1773 A.D. The coverlets of single layer which had floats were phrased as summer and winter, due to the color variations attained by the weaving in the fabric (Wertkins, 2004).



Fig 10 : Both sides of the example of reversible double cloth of an ancient Norwegian border
Source: Becker and Wagner, 2009

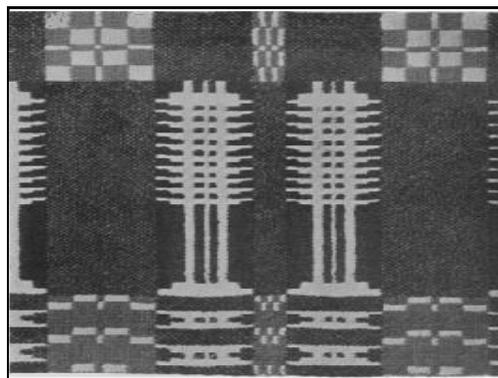


Fig 11 : Section of a double cloth coverlet, wool and cotton, American probably Pennsylvania, c.1800
Source: Reath, 1926

Further to increase the knowledge about the double cloth produced in America the book titled *American Coverlets and Their Weavers: Coverlets From Collection Of Foster and Muriel Mccarl* (Williamsburg Decorative Arts Series) depicted that the fancy and figurative coverlet were created in the Middle Atlantic and Midwestern states of America, before New England's powerloom took away the opportunity from the hand-weavers (Anderson, 2002). The recession in the handloom industry forced weavers to migrate from their hometowns towards west.

Even after the migration of all the weavers, Maryland, Tennessee and Virginia were still producing coverlets in their cities. The weavers who shifted to United States and Canada in mid-19th Century used shaft looms to create block-patterned double cloth for developing coverlets. A large collection of double-cloth coverlets are preserved in the Royal Ontario Museum, Toronto (Dorothy and Burnham, 1972).

– **English coverlets :**

The origins of the pioneer weavers of double cloth in Scandinavia are traced to certain places in Europe: Southern Germany, Switzerland and Great Britain, here especially Scotland and Wales.

Weaves in handloom fabric article exposed about the double cloth fabric from Spain of 15th Century made up of linen and silk, through an explanation about the double cloth weaving technique used in Europe during the 15th and 16th Centuries (Reath, 1926).

In the nineteenth century a very influential designer named William Morris (1834 A. D. - 1896 A.D.) rejuvenated the craft of hand-woven double cloth in England. He supported new technology and old traditional craft and thus, in 1877 A.D. taking inspiration from the collection of silk fabrics at South Kensington Museum (now the Victoria and Albert Museum), he created Bird woven silk and wool double cloth using Dove and Rose. The fabric was created in 1878 A.D. on his in-house hand looms. The woven cloths were appreciated and liked by the customers and were later produced and supplied in large quantities in the market, thus revived the age old technique of double cloth (www.william-morris.co.uk).



Fig 12 : Detail of a border (Face) double compound cloth - Linen and silk Spanish, 15th century



Fig 13 : Back of the cloth

History of double cloth in India :

As double cloth was a traditional craft of Peru, Scandinavia, America and England, similarly this cloth has been an important part of traditional Indian textiles too. The history traces the craft of double cloth production from Northern India to Western India.

– **Uttar Pradesh :**

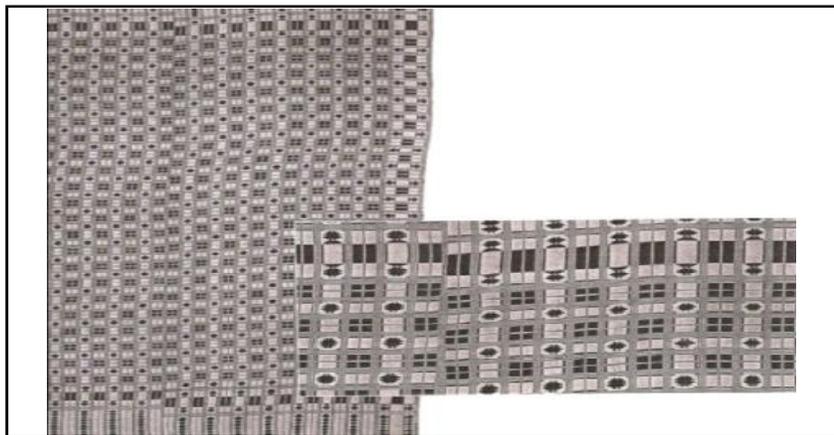
According to *Textiles of India* book, in reference to mashru fabrics of 1600-1700 A.D., a fabric called *Sangi* was produced in a number of cities in Uttar Pradesh such as Agra, Azamgarh, Mau, Mubarakpur, Shahjahanpur, Barabanki, Farukhabad, Aligarh and Benaras. *Sangi* also belonged to mashru category whose literal meaning was together. Therefore there were two assumptions among the weavers regarding this fabric's nomenclature. Few supposed that as the fabric had two kinds of warp, cotton and silk woven together, so it was named *sangi* while some believed that due to its

pattern it was named *sangi*. In Mau, Azamgarh and Mubarakpur the warp was usually of cotton and weft was tussar silk. However in Benaras, it was woven with double layers of silk warps and cotton weft and had golden or silver *butis* woven in the alternate rows of wavy striped patterns.

There was another fabric pattern known as *Khazuri*, which had double layers of silk warps, cotton weft and alternate vertical stripes of five different colors with wavy pattern. It was produced in Mau and Azamgarh in Uttar Pradesh (Agrawal, 2006).

– **Punjab and sind :**

In olden days the craftsmen of southernmost province of Pakistan Sind created cotton double weave *khes* blankets, used as spread or upper garment at Nasarpur near Hyderabad and in Northern Sind. The early documentation shows that in 1625 A.D. the East India Company from Surat exported *khes* produced in Sind and Punjab. These *khes* were made by double cloth technique providing them a double sided geometrical pattern (Gillow and Barnard, 2008).



**Fig14 : Cotton double weave khes blanket created at Nasarpur or Thatta, Sind
Source: Gillow and Barnard, 2008**

– **Panipat, Haryana :**

Panipat is a district of Haryana state in India. The weaving craft of *Khes* in Panipat came from West Pakistan, along with the weavers after partition in 1947A.D. The traditional craft of *khes* was composed of thick cotton cloth which was used as spread or upper garment. The North Western part of the country, particularly Multan Division of undivided Punjab before partition of India was known to be the birthplace of *Khes*. Illustrious centers of *khes* weaving included Derajat, Dera Ismail Khan, Jhang, Multan, Shahpur Kohat Peshawar, Muzzaffargarh, Lahre, Karnal, Ludhiana and Patiala. Out of these Multan, Shahpur Bhera and Khishaab in the Shahpur District and Jhelum were centers of great excellence. *Khes* was produced using double weave or double cloth techniques. Earlier *khes* were produced on smaller looms and therefore to achieve a bigger width, two or three widths of the fabrics were stitched together. It was known as *Char Paira Khes*. These *khes* were made up of silk with reversible geometric motifs. Currently figurative designs and patterns are developed on this fabric using jacquard looms (www.craftrevival.org).

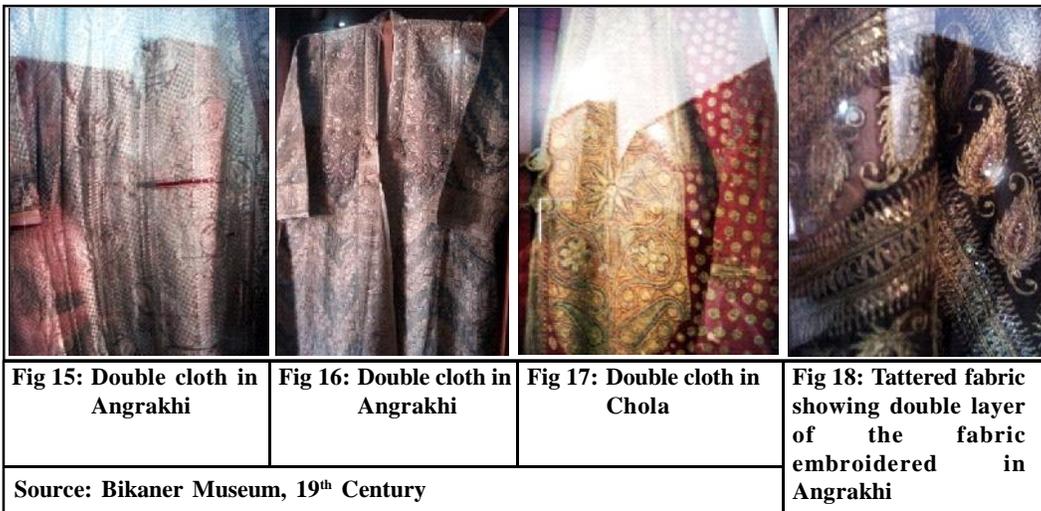
– **Bikaner :**

Bikaner is a district in North West of India. This place is famous for its royal heritages, forts and wool used in carpet industry. Many artifacts from history have been conserved in various museums

of Bikaner. One such Museum run by State Government of Rajasthan called as Bikaner Museum is located in the center of the city. This Museum has many artifacts on display from 18th and 19th century. Its one section is entirely devoted to historical textile pieces, garments and accessories of royal families. There are few carpets on display which also belonged to the 18th and 19th century (Srivastava, 1960-61).

Bikaner's history revealed that in 18th and 19th century, the prisoners of local jails in Bikaner were employed for weaving carpets. In the early 18th century they were trained by master craftsmen of weaving but later these prisoners became masters of weaving themselves by practice. As Bikaner is a desert land, so the fibers of camel hair as well as sheep hairs were used in weaving carpets. The carpets in Bikaner Museum showed inspirations from Persian carpets with more geometrical patterning and largely composed of local sheep wool sourced from Bikaner, using double cloth technique for their creations.

The male garments of royal families put on display in the museum included garments like *Angrakhi* and *Chola*, which were from 19th century and had high embellishments on the base fabric. The garments were made up of silk and they showed satin lining inside. The upper fabric on which the embellishment was done exhibited double layers from where ever it was tattered. Most of the fabrics showed satin weave on the top layer.



The third segment of the textile section had unstitched garments which included *Longis*, made in Bhawalpuri in the 19th Century. They were mostly made up of silk. These fabrics showed usage of double cloth techniques at various intervals in the whole width dimension.

According to the Curator of the Museum all the male garments and carpets used double cloth techniques in their production. The *Khadi Bhandars* in Bikaner also showed the presence of sheep wool double cloth blankets and double cloth cotton *khes*. However, these products were sourced from outside Bikaner like Uttar Pradesh and Punjab.

– **Gujarat :**

The newspaper titled Ahmedabad Mirror's lifestyle section referred to *Sujani* quilts from Bharuch, Gujarat, as a unique languishing craft. *Sujani* quilts are made on a handloom with the double cloth-weaving technique. Chequered geometrical patterns with small pockets were woven on to the loom and filled with cotton while weaving and were locked on to the loom itself. *Sujani* quilts are believed



Fig 19: Longi using double cloth technique
Source: Bikaner Museum, 19th Century



Fig 20: Close up of a Longi



Fig 21: Sujani quilts from Gujarat, Double cloth wadding technique
Source: <http://thequiltsofindia.files.wordpress.com>

to be a hundred-years-old tradition practised by some Muslim families in Bharuch passed on from one generation to the next. However with the modernization of industry, it is losing its identity and has been tagged as a languishing craft (Barot and Fernandes, 2008).

Conclusion :

The above facts and findings conclude that the construction of double cloth is an age old craft. It came into being with the progression of weaver's craftsmanship and advancement of technology in handloom industry. The main aim of the paper was to document the evidence of double cloth technique and its products around the globe from the past to mark it as a traditional craft. However, this hand craft in present is losing its charm and market which can be regained with some design and technology interventions, up-gradations and government support, which will create interest among weavers of the handloom industry in expanding their product diversifications and hence their market.

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