

Threads Crossing the Warp

MODULE 9

Traditional use of weaving in different European countries (including Northern Europe)

























Map of Europe







Northern Europe map Scandinavian countries





Northern Europe refers to the portion of Europe to the north of Western Europe, the English Channel, and the Baltic Sea; it also includes the Baltic republics of Estonia, Latvia, and Lithuania.

Countries that are in northern Europe are:

Estonia

Latvia

Lithuania

Denmark

Finland

Iceland

Norway

Sweden





What is tradition?

According to Cambridge dictionary tradition is a belief, principle, or way of acting that people in a particular society or group have continued to follow for a long time.

https://dictionary.cambridge.org/dictionary/english/tradition

Traditions are ideas and beliefs passed down from one generation to the next. They're not rules, but rather guidelines. Each family within a culture can have its own unique traditions while sharing other common ones. Traditions present a link to the past. They allow you to honor your ancestors and pay respect to certain aspects of your culture.

https://preemptivelove.org/blog/difference-between-culture-and-tradition/

What is culture?

Culture is the collective term to identify certain ideas, customs, and social behaviors. It represents a group of people or a society, combining their knowledge, beliefs, morals, and laws.

https://preemptivelove.org/blog/difference-between-culture-and-tradition/





What is the difference between tradition and culture?

The first key difference between the two terms is that actual set of things that each describes. Tradition would describe a belief or behavior. A deeper definition would define it to be "the forms of artistic heritage of a particular culture; beliefs or customs instituted by societies and governments, such as national anthems and national holidays; beliefs or customs maintained by religious denominations and church bodies that share history, customs, culture and, to some extent, body of teachings". Families may also pass traditions down through the generations.





Culture, on the other hand, is a term that is not just limited to beliefs and behaviors, though they are included. It also includes knowledge, art, morals, law, customs, and any other capabilities and habits acquired by man as a member of society. A more contemporary definition would be, "Culture is defined as a social domain that emphasizes the practices, discourses, and material expressions, which, over time, express the continuities and discontinuities of social meaning of a life held in common". As you can see, culture is much broader term encompasses tradition, as well as other things. Simply put, traditions are a part of culture.

Rikki Roehrich. "Difference Between Culture and Tradition." DifferenceBetween.net. July 12, 2019 < http://www.differencebetween.net/miscellaneous/difference-between-culture-and-tradition/ >.





By knowing the meaning and the difference between tradition and culture we can have a better understanding how this two influence in the way we live, we work and how we practice our knowledges in all the fields.

When we talk about tradition and culture in European countries we can find similarities and differences as well. All the similarities and differences in Europe comes even from geographical position of the countries. The countries that are in border with each other they have similarities but the countries that are far from each other have differences. However, tradition and culture changes not only between countries but even between cities and region.





How all these things are shown in weaving?

The history of weaving follows the history of humanity step by step, trying to meet its material needs year after year...

Textile was at first a product of home industry. People produced textile to meet their own needs. Once production exceeded their own needs, the textiles were traded for other goods.

https://tootal.nl/it/news/show/22/The-history-of-woven-textiles

Weaving has started as a domestic labor many years ago. Because of the way of living, lack of economy and no technology, families have to produce cloths about themselves and staff for their houses like carpets, pillow cases, sofa covering, rugs etc. all these clothing homes or house accessories were produced by people's hand. As we know each family lived separately or some of them in tribe, where they have different beliefs, different way of living and different culture. These differences were shown even in their handcrafts, different models, different colors, different textile, different traditional clothes, etc.







Weave, tile from Giotto bell tower, Andrea Pisano, 1334-1336, Florence

Weaving is a work process that dates back to human history. The need to protect oneself from atmospheric conditions and survival prompted man to find ways to create and realize simple weaving with natural materials. Fishing nets may have been the first nature-inspired weaves (e.g., spider webs, etc.).

















LITHUANIA

ESTONIA









Finland



Czech Republic







Folk dress Latvia



Folk dress Norway







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Northern Germany

Romania Folk costumes







Slovenia



Sweden





In the Middle Ages broadcloth became popular and the broadcloth industry clustered in particular in northern France, Flanders and in the Netherlands. Broadcloth was wear-free, water and soil release, and long-lasting whilst requiring little care.

By the Middle Ages, a well-developed supply chain consisting of dyers, spinners, weavers, fullers, drapers, and tailors had been implemented to support the booming textile and weaving industry that was fast becoming one of the most lucrative trades across Europe. The city of Coventry was made particularly wealthy through the explosive weaving trade. At this time, weaving in Europe continued to take place at the loom that had dominated the weaving process for millennia.





 Archaeological findings confirm that in the Neolithic the presence of stone remains of the weight of the weaving loom, in different places. With the perfection of knitting and weaving in different ways and forms, the aesthetic and decorative aspect of human textile products is intertwined.

• Series of operations (craft or industrial) related to the production of clothing; they are essentially intended to produce the weaving of a string of parallel yarns with a continuous yarn (fabric), according to a predetermined type of weave, and are carried out by means of looms (by hand or by mechanical means).





CELTIC REENACTMENT AT THE OPEN AIR MUSEUM MITTERKIRCHEN, AUSTRIA, AUGUST 2014



Understanding the Archaeological Record: Reconstructing a Warp-Weighted Loom | EXARC



Warp weighted loom | Warpweighted loom from West Stow





In addition to the weight loom, the ancient peoples used the horizontal loom, on the ground, where the tension of the threads was taken by pulling between the front and rear beams. This type of loom, more refined, continued to be used for millennia by the Egyptians and Romans. In the Middle Ages, the vertical loom continued to be used to make tapestries, and in 1250 it was first fitted with a pedal.





- Loom construction is always done and more precisely, to the point that it allows production of complex fabrics and refined in the Renaissance.
- Weaving becomes an art, thanks to the arrival of silk from China: flourishes production of fine fabrics such as satin, brocade, damask, velvet.







Tapestry is an ancient form of textile art which has been practised all over the world for thousands of years. Ancient Egyptians and the Incas used woven tapestries as shrouds in which to bury their dead. The Greeks and Romans used them as wall-coverings for civic buildings and temples.

By the mid-15th century as many as 15,000 weavers and other artisans were working in the tapestry centres of the french Loire Valley alone. Using either a vertical loom (highwarp) or a horizontal loom (low-warp), and a range of no more than 20 colours, medieval weavers produced images of religious stories from the Old and New Testaments, and - from 1500 onwards - secular scenes of battle, Kings and noblemen.

http://www.visual-arts-cork.com/tapestry-art.htm#chronology





As a result, a very sophisticated culture developed, with impressive achievements in the arts and architecture, rivaling those of Northern Italy. Trade in the port of Bruges and the textile industry, mostly in Ghent, turned Flanders into the wealthiest part of Northern Europe at the end of the 15th century. Flanders became one of the richest and most urbanized parts of Europe, weaving the wool of neighboring lands into cloth for both domestic use and export.

15th Century, Flanders, which is in northern portion of Belgium and one of the communities, regions and language areas of Belgium, becomes the centre of European woven textiles. Favourite materials employed in tapestry weaving include Picardy wool, Italian silk, Cypriot silver and gold threads. Subjects featured are mainly Biblical or mythological stories. Perspective and landscape remains clumsy. In France, the Loire Valley - the rural playground of the French nobility and the location of many of their chateaux - became an important centre of tapestry production. The "mille fleur" style becomes high fashion.

http://www.visual-arts-cork.com/tapestry-art.htm#chronology





In the early part of the 16th century, indigenous Italian tapestry weaving took place in Milan, Mantua, Genoa, Verona, and Venice.

Scandinavian tapestries were woven in both Copenhagen and Stockholm for the Danish and Swedish royal families. Nearly all were designed and woven by French or Flemish artisans. In addition, Norway and Sweden produced numerous types of folk tapestries - coarse and highly coloured - usually in small rural communities (see: http://www.visual-arts-cork.com/tapestry-art.htm#tapestry).

In Iceland, references to foreign cloth usually describe silks or linens with lavish colors and may be literary exaggerations, embellishments rather than factual descriptions, or descriptions that focus only on the most arresting textiles at the expense of descriptions of plainer imports. They do paint a far more elaborate picture than what has survived archaeologically or in museum collections. With few exceptions, and those being clerical robes, preserved textiles from the medieval period are lacking in any bright colours (p. 5). Iceland exported cloths with Norway and British Isles.





Archaeological evidence provides independent support that local tastes in these regions, especially the British Isles, may also have influenced how cloth produced in Iceland for export was spun and woven (p. 6)





The artisans use ancient techniques and produce by hand what their competitors do with mechanized processes.







A worker working on a spinning machine at Tay Spinners mill in Dundee, Scotland. This factory was the last jute spinning mill in Europe when it closed for the final time in 1998.





Weaving

Weaving can be done by hand or by using machines. Machines used for weaving are called looms. Loom originated from crude wooden frame and gradually transformed into the modern sophisticated electronic weaving machine. Nowadays weaving has become a mechanized process, though hand weaving is still in practice.

Weaving is one of the primary methods of textile production and it involves interlinking a set of vertical threads with a set of horizontal threads. The set of vertical threads are known as warp and the set of horizontal threads are known as weft.





Weaving Terms

Tabby or plain weave

Going over, under the warp threads

(to) Beat in

To push the weft close to the previously woven weft

Selvedge edge

Woven sides of the piece









Weaving

- In the second half of the eighteenth century in new industrial production, cotton is most prevalent and used by natural fibers and the largest non-food agricultural crop. The oldest archaeological finds of cotton textiles date to 5800 BC
- In 1787 the steam engine was first applied to move a loom: In 1790 Joseph-Marie Jacquard, invented the treadle loom,







LANCASHIRE LASS AT HER LOOM.



Early 1900's postcard of pale unhealthy looking mill worker, printed on bottom is "Lancashire Lass at her loom", circa 1910, Lancashire, England, U.K.

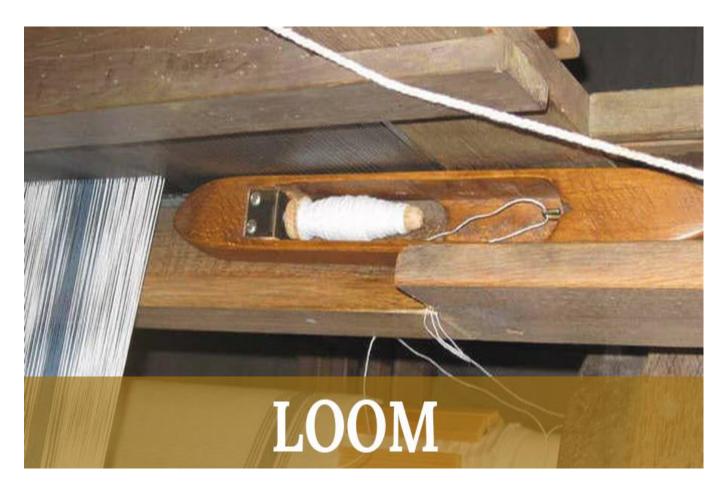






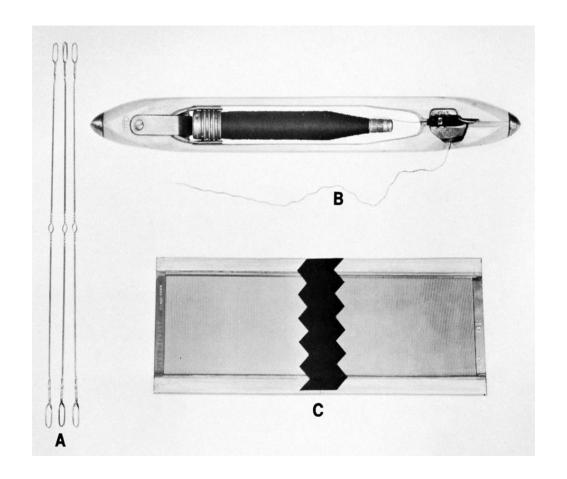
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Front view of an old handloom weaving machine









Loom devices and their functions:

- (A) heddles, used for shedding,
- (B) the shuttle, used for picking,
- (C) the reed, used for beating in.

(Courtesy of the University of Manchester Institute of Science and Technology, England)





• The loom that weaves fish net, the world famous Jacquard's loom. His "Jacquard loom" later turned out to have a major role in the development of programmable devices and machines, such as the digital compiler made by the IBM company, which was used for development of modern day computers.











Diego Velázquez (1599-1660), *The Spinners, or The Fable of Arachne'*, ca. 1657, Spanish Baroque, oil on canvas, 220 x 289 cm, Museo del Prado-pintura, Madrid, Spain (P01173).





Major changes in regional patterns of spinning and weaving are similarly socially informative acts (p. 6).

Norwegian and Gotlandic traditions remained more conservative with a persistent use of older spinning methods and the continued production of z/z spun twills. In the Icelandic case, z/z textiles produced in manners similar to contemporary Norwegian textile traditions dominated at the time of settlement (p. 6).

Spinners and weavers used the same tools in northern Europe since AD 200 to spin equally well in one direction or the other (p. 7).





Spinning is the twisting technique where the fiber is drawn out, twisted, and wound onto a bobbin. Explanation of spinning process:

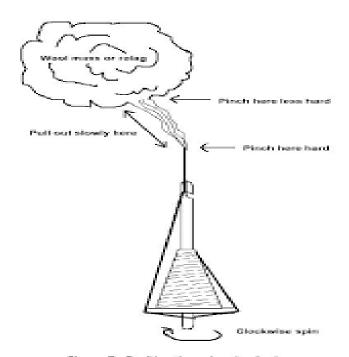
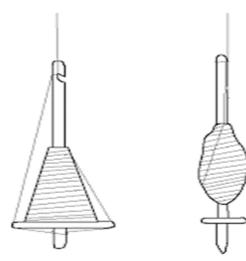


Figure 7. Drafting thread and spinning









Drop spindle







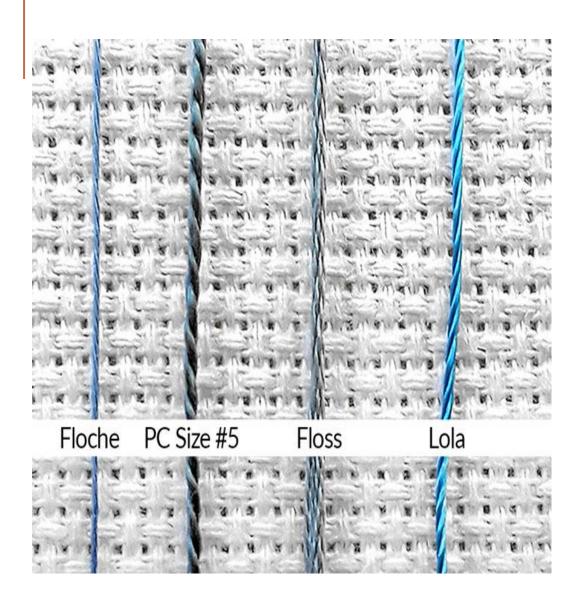
Traditional use of weaving in different European countries (including Northern Europe)

The production of the 2/2 twill with z- and s-spun combined yarns may also have been a response to British market demands and standards. These may, in turn, have developed in Britain in response to continental European concerns and demands. In northern continental Europe during the 10th and 11th centuries spin direction appears to be have been normally z/s during this period, as was noted in Germany; the Netherlands; and Scandinavia excluding Norway and Gotland

As with the change in the width of the Icelandic ell, Icelanders' shift from using a range of yarn types to produce locally consumed textiles towards a homogeneous focus on z/s-spun yarns appears to be linked to this transition from production for Icelandic needs to production for foreign consumption.







The direction of the twist is important. If you hold the roving at one end and you twist it to the left, you create an "S" twist. If you twist it to the right, you create a "Z" twist. It is a two-step process to create most embroidery thread. The staples are spun together with the primary twist first in a "Z" twist, then with an "S" twist.



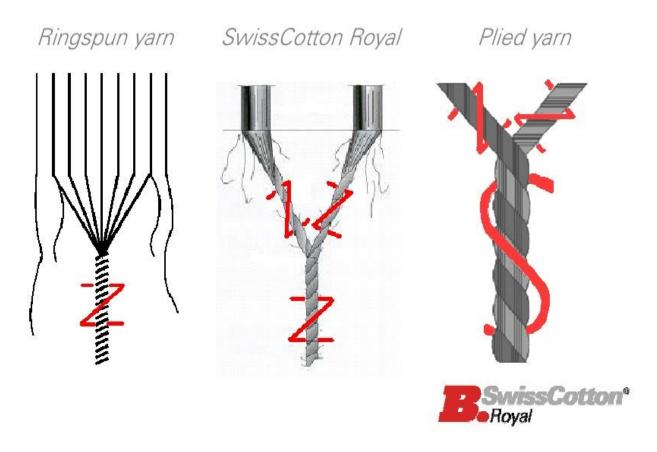
DMC Floche #799, DMC Pearl Cotton Size 5 #931, DMC Floss #932, and EdMar Lola #112. The first three have an "S" Twist and the last one has a "Z" twist. Can you see the difference?





Spinning methods

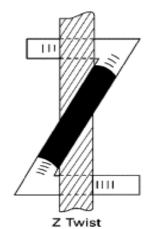




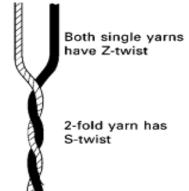
S-twist yarn is a yarn spun counterclockwise and is normally used to create right-handed twill, while Z-twist yarn is used for left-handed twill. By opposing the direction of the yarn and the direction of the twill, the finished material is softer than fabric created with a corresponding yarn and twill weave.

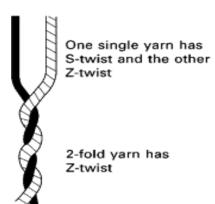


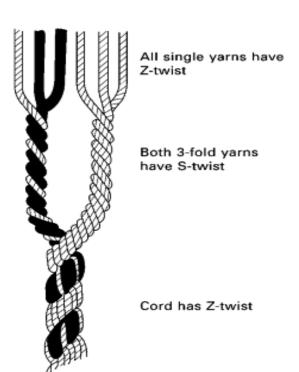












Direction of twist and construction of plied and cord (cabled) yarn (source: Methods of Test for Textiles, British Standards Institution, Handbook No. 11, 1963, British Standards House, London).





- The yarn made with the machine was better than what it could produce artisanal. The handmade yarn was of different thickness and strength, while with the machine it was regular and strong in proportion to the weight.
- ★In 1950 it was a German company that started the production of knitting needles, in fact, in the latest models, to increase the speed of weaving, this was replaced by the use of air or water that directs the tissue through the threads.



Woman at spinning wheel making yarn.





Traditional use of weaving in different European countries (including Northern Europe)

Early modern women had deep and multifaceted relationships with domestic material culture that began and developed in childhood and youth (p. 236). Social status also shaped the ways in which young women participated in various forms of domestic textile work, including weaving, spinning, and sewing (p. 246). Girls with a high social status perhaps oversaw the production of cloth by servants or learned to weave themselves using this equipment or may have learned to oversee the production of textiles by other women (p. 247).

Many Bolognese households had tools for working with textiles. Notable were looms and equipment for weaving, even when the heads of these households were not employed as weavers, tailors, or merchants of silk or wool. When practiced as a principal craft (and so by men), the production of textiles took place in a workshop rather than within living space. Therefore, the presence of equipment such as looms in kitchens, bedchambers, and other domestic spaces suggests that in these instances weaving was performed by female members of the household (p. 246).





Traditional use of weaving in different European countries (including Northern Europe)

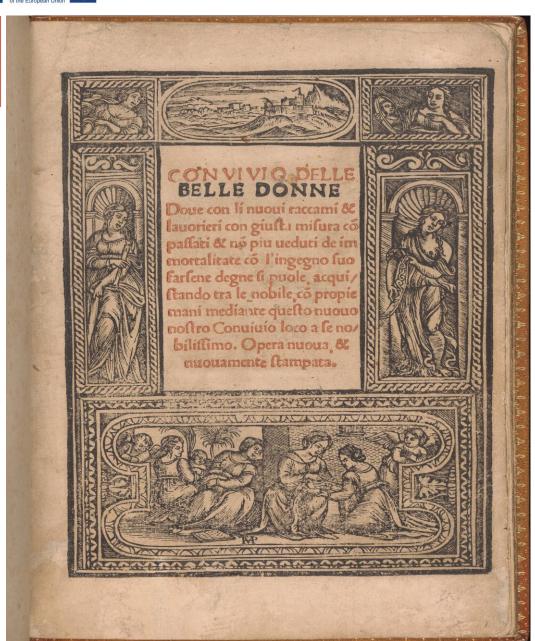
However young women from elite families were more likely to have been taught to work with a needle and thread than a loom. From this point of view, we can see that social status in Europe makes a difference for young women, some of them have to work with loom but some of them have to work with a needle and thread.

So the works with needle and thread was practiced more from girls that comes from elite families. Girls learned to spin thread, weave textiles, and embroider silk using the same tools as their mothers, sisters, or other female members of the household.

As seems natural, images of women's textile work imply that skills and knowledge were shared from one generation to the next (p.247).







Convivio delle Belle Donne, Nicolò Zoppino's book of embroidery patterns, dated to 1531. Shows a group of females in a range of ages at work with textiles.





As a young woman became more proficient in weaving or sewing, she might be given her own equipment, particularly when she married and left her family home for that of her husband (p. 247).



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Unique hand-made weaving equipment

Ancient weaving machine in Italy





When considered in relation to visual, literary, and archival sources, material culture can reveal some of the experiences that shaped female youth in the early modern period. Domestic objects are particularly valuable as evidence of these experiences; they were part of everyday life and work and, in addition, helped young women learn and show the skills they would need to fulfil future roles as wives and mothers (p. 250). All of these were intended to be used in the service of the family and household.

Hand weaves textiles, as made-made objects, are a material medium for the communication of cultural values. Behind every man-made object is a valuable concept, beliefs, customs, rituals, habits and ideas that shape its perception within a socio-cultural environment. Visual culture has been described as the artistic tastes and interpretation of what is aesthetically pleasing to an individual depending upon the surroundings and the environment (p. 60).





In Europe, cotton textiles had been virtually unknown until the sixteenth century. Spinners and weavers processed wool, flax, and hemp, which were generally coarse fabrics that required intensive labour. Women dominated the more labour-intensive preparatory stages of textile production, and men were occupied in the processes with higher added value, such as weaving, cloth shearing, and dyeing. From the end of the sixteenth century, lighter types of woollen cloth (such as serge) emerged, first in the Southern and Northern Netherlands, and later in England. For much of the seventeenth century, the Dutch town of Leiden became the leader in the production of woolen cloth for the world market (p. 140).

Traditionally in Samugheo the art of weaving was practiced by almost all women of all social classes. Some types of clothing were produced at home on the loom, personalizing certain items, such as bed blankets, which were given from mother to daughter; sheets, tablecloths, tapestries, tablecloths, scarves, etc.





Traditional use of weaving in different European countries (including Northern Europe)

Weaving in Sardinia is one of the most distant expressions, the carpet is one of the most precious fruits that reflects the history of isolation and contains tradition and innovation.

An example of this is the Samugheo rugs whose weaving began around the 1920s, then was used as a bedding rug with two basic techniques suitable to withstand wear, made with a horizontal frame; developing in the 70s with an increase in the production of floor carpets, where the most used material is Sardinian wool, along with linen or cotton, with the use of different colors.

While prehistoric weaving appears as a predominantly female work domain, weaving became a male profession in urban contexts, organized within guilds. Hence, it has almost become a dogma that the expanding medieval textile industry, and corresponding transition from a female to a male work domain, was caused by new technology – the horizontal treadle loom in Northern Europe





Traditional use of weaving in different European countries (including Northern Europe)

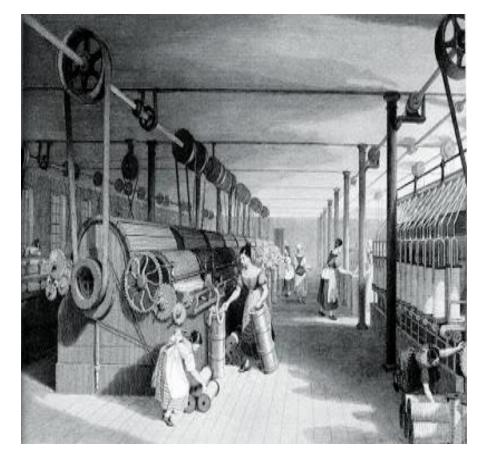
In 1833, was founded a weaving school in the Netherlands, where boys were taught by English weavers how to use the flying shuttle. Yarns were largely imported from England (p. 150).

The change from a domestic household-based production to a more commercially based industry took place at different times and scales in various areas of Europe and did not only involve men.





The industrial revolution in the textile sector The main English manufacturing activity in the 18th century was textiles, and in particular the production of woolen fabrics. This activity was carried out mainly by rural work, to which English traders were the first to turn to Europe.







- ★The history of the Neapolitan dress tradition is closely intertwined with that of the fabric processing tradition, and in particular of silk.
- Since the time of Pope Leo III, the skillful production of Neapolitan textiles during the period of the Byzantine Duchy is described. In that period was born the prestigious tradition of silk, which will reach its peak in the Bourbon factories of San Leucio di Caserta, about a millennium later.







Before we weave a warp it is required to have a design in mind that'll define which type of fabric it will consist of: which structure it will have, if it's dense and heavy, or looser and lighter. For this demonstration we will produce a small set of pieces with warp and weft linen, with a thickness of 35cm and length of 180cm each.

Warp is the set of longitudinally disposed yarns forming part of the fabric. In looming, these are the yarns that are kept in tension in the weaving preparation (also in the longitudinal direction).

Performing the calculations of the warp entails, once the design has been established, calculating the set and the length of the yarn warp to weave.















WARP ASSEMBLY

Assembling the warp means to arrange it in the loom in a way that makes it ready to begin the weaving. It is during the warp assembly that the sett, width and fabric structure(s) are defined.

The denting will define the sett and width of the fabric. The threading in heddles and the tie-up will define the possible fabric structures.

It becomes essential to understand how to choose the correct reed for the work we're going to produce, as well as the threading in the reed and the heddles before we begin this process

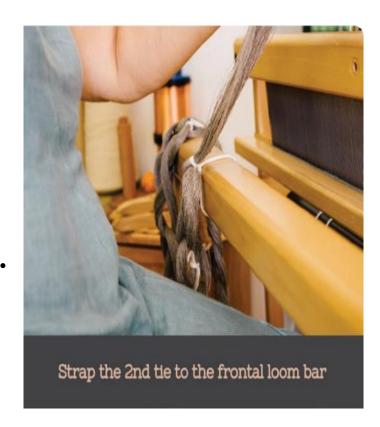




1. Marking the center of the loom to ensure our piece is centered.



2. Tying the 2nd tie of the warp to the frontal loom bar.





3. Securing the cross in the loom bar.





4. Measuring and centering the width that we want for our piece.



5. Separating the leftmost yarn and, with the help of the reed hook, threading it through the leftmost dent in the width that our piece will occupy in the reed.





6.Pass the same yarn through a heddle eye of the first shaft indicated in the threading.



- 7. Execute the sequential threading of each warp yarn that we secure in the loom bar, following this order of passage: first through the reed and then heddle, taking into account the threading rhythm in the reed that we previously defined (6 yarns for each 4 dents in a rhythm of 1-2-1-2) and the threading of the shafts matching the twill.
- 8. Execute this whole threading process until all the warp yarn has been threaded through the reed and heddles and tied in groups of 4.











FABRIC STRUCTURES

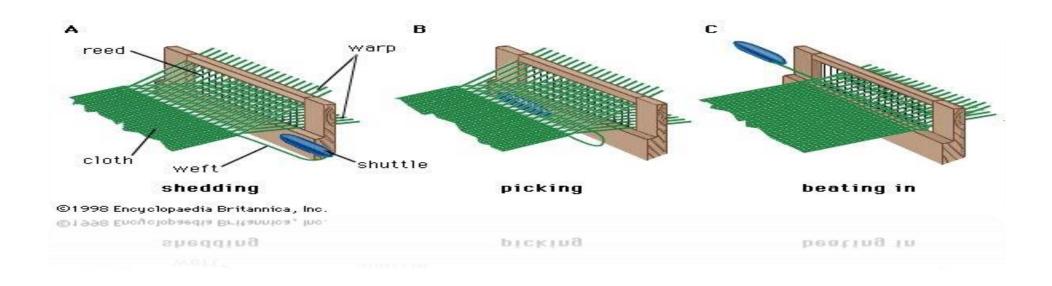
Weaving is performed by an orthogonal crossing of two parallel yarn systems, the warp and the weft, according to several sequences, in order to create different structures.

The (usually pulled taut) vertical strings are called the warp, and the horizontal thread that is intertwined over and under them is called the weft. The way these two strings are interwoven affects the characteristics of the cloth that will be produced.

Although fabrics can exhibit very diverse looks, structurally there are only 3 fundamental structures: tabby, twill and satin, which allow an infinite number of derivations and compositions. Any fabric produced in a loom is based on one or more of these 3 yarn cross forms.







An individual thread from the warp, of indefinite length, is called an end; each individual length of weft, extending from one edge of the cloth to the other, is called a pick, or shot. Consecutive picks are usually consecutive lengths of one piece of weft yarn that is repeatedly folded back on itself.





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