Textile Treasures: A Brief Trip Through Textile History

Italian Rococco style bed with embroidered silk hangings villa Mansi 1635, Segramigno, Italy.
Published: *L'Art de la Passementerie* by Catherine Conzel and Sabine Marchal, Societe Nouvell des Editions du Chene, 1992.
Photograph by Marc Walter.

Modern textiles are available in an array of quality and quantity that kings and emperors in former times could not have imagined, and would certainly envy. Modern interiors benefit from millennia of textile trial and error as well scientific advances over the last 300 years. What we in the design trade now take for granted in comfort, durability, color, and texture represents a truly astonishing achievement that deserves some reflective consideration.

Fine cloth and vivid colors have long been objects of desire for people throughout history. Finely woven linen was so highly valued in ancient Egypt, that it was used as currency. Murex purple dye was so prized in ancient Rome, that only emperors were allowed to wear the full purple toga, and Roman senators were only allotted a small purple border on their togas as a symbol of high rank. Roman patricians also paid outrageous prices for silk from China and India, and silk was literally worth its weight in gold in ancient China and Japan. Renaissance European sumptuary laws forbade any but members of the nobility from wearing red, and kings had their portraits painted with red velvet draped behind them to indicate their power and wealth.

It may surprise you that global trade in textiles is nothing new. Ancient Egyptians traded linen and other goods with all of the Mediterranean world, and much of Asia. China, and India traded silk, cotton, and dyestuffs long before the ancient Romans became their customers through the famous silk route. Ancient Romans made wool production a thriving business in early Britain, by selectively breeding large herds for fleece color and quality. Wool production became a main source of wealth for Britain through the 19th century, and cotton put the fledgling United States of America on the world economic stage. Part of Spain's interest in the Americas, after gold and silver, was cochineal, a dye extracted from insects that produced a beautiful, vivid red. A small amount of cochineal could dye ten times the amount of cloth per weight than the dyes formerly available in Europe in the 1600s and 1700s. Spanish conquistadores also used silver mined in Mexico to purchase silk from China in the early 18th century. Textiles have historically been such an important part of the economic well-being of so many cultures that production methods were often state secrets, and the large amounts of money involved often led to espionage, theft, conquest and war.

Before the industrial revolution, the production of textiles was extremely labor intensive and often required messy and odoriferous production methods. For example, part of the process of creating blue cloth using the indigo plant, involved soaking the dye extracts and the cloth in large vats of fermented urine. Imagine working with that all day! Ancient dyers were often required to set up their works far away from villages and towns, and down wind, because they smelled dreadful. Thanks to modern chemistry, we now isolate and use the compounds that make the color changes possible without the accompanying stench.

Linen still requires soaking flax plants in water until the outer husk of the stalk is "retted," or decomposed, so the pectin will release the fibers. However, this rotting process used to take from ten to thirty days under water in a local stream, which polluted the stream. Laborers then had to break open the stalks, which required lots of whacking, extract the fibers, and comb them on a hackle. (A "hackle" is a fixed upward-pointing group of nails with ever closer spacing to split and refine the combed fibers and is the origin of the saying. "raising your hackles.") Next, workers spun fibers into thread to weave into cloth. Dyeing cloth required plants, fungus, insects, or minerals that had to be gathered, processed, and applied. Color was also dependent on the weather, soil changes, and plant growth, among other things, which provides perspective onto today's slight dye lot variations.

The industrial revolution shifted production of cloth of all types into high gear and made vast amounts of colorful cloth available to common people for the first time in history. The spinning Jenny, water and steam-powered looms, the cotton gin, and the sewing machine all dramatically changed human life. Textile production moved from the home to factories, and people moved from the countryside to cities to work in those factories. These great movements of population and the changes in the way people lived contributed to revolutionary social changes that occurred world-wide in the 18th, 19th, and 20th centuries.

Another huge change occurred when the first commercially viable synthetic dye was created in 1857. William Henry Perkin, an 18-year-old student in the new field of chemistry, noticed that the processes used in the quest for synthetic quinine, also produced color. His teachers and peers thought it beneath them to pursue commercial uses for their work, but Perkin and his father thought otherwise, and the new aniline dye, Mauveine, was wildly successful. Queen Victoria ordered a mauve gown for her daughter, and soon everyone had to have it. (The original mauve, was a deep magenta shade. "Magenta" was another name for the color invented to circumvent Perkin's patent on mauveine.)

Analine dyes sparked a general interest in chemistry that subsequently affected everything from medicine to warfare. From 1857 on, new synthetic colors for textiles, paint, and many other uses were invented at an explosive pace, sometimes literally. When Perkin invented synthetic alizarin crimson, he changed the world market in plant and insect sources of the color red. This was such an important and threatening development to the Shah of Persia that in 1900 he prohibited the use of aniline dye for rugs, and all aniline dyes in that country were seized and publicly burned.

In 1894 the quest for a synthetic silk led to the development of rayon, also known as viscose silk. Acetate followed in 1924, nylon in 1931, Orlon in 1950, Dacron in 1951, and polyester in 1953. Proscion dyes were developed in 1956, and cibacron dyes in 1957, making even more colors available. In 1972 Quiana polyester was invented, and in 1986 microfibers entered our vocabulary.

The new generation of microfibers and solution-dyed acrylic fabrics, made initially for outdoor use, are some of the hottest items for the modern interior because they are practical, beautiful, and they have a great feel. They are fire-retardant, and resist fading, and can be woven into sheer curtain fabric, soft chenille, or heavy velvet for upholstery, and mimic virtually any other fabric imaginable. There is even a fabric that reflects UV rays and heat that is very sheer yet significantly reduces air conditioning costs.

And now we have entered a new era of "smart" textiles that bind nanotech molecules to fiber molecules rather than coat the surface of the fabric, so there is no residue. These textiles are called "smart" because they are bioactive, meaning they respond to temperature and humidity to eliminate odors, adjust absorbency and temperature to make you more comfortable, and resist spills. The molecular treatment can be added to many types of fibers, and are already being used in clothing. You will soon see them in bedding, upholstery, and curtain fabrics. You will also be seeing more of the first new fiber in 30 years, lyocell, a clean wood pulp-based fiber, known as the brand "Tencel." It is as soft as silk, cool as linen, strong as cotton, and warm as wool, in addition to being bioactive.

Far from being obsolete, natural fiber production is now more efficient than ever. Fine linen is now produced in France, Belgium, Holland, and China. Excellent wool is produced in the UK, China, Australia, New Zealand, Uruguay, and Argentina. China and India produce most of the world's silk, but sericulture takes place all through Eastern Europe and Asia. Huge amounts of cotton are produced in China, the US, and India, and smaller amounts are grown across the globe. Textile processing and weaving is cleaner and faster than ever because of advances in biology, botany, and chemistry.

Computerized looms and digital printing are also revolutionizing the weaving and printing of cloth. Innovative textile designers are blending the natural fibers with artificial fibers and nanotechnology. Today's interior designers have an amazing array of textiles available to address the needs of modern homes. This extraordinary paint box of colors and textures, unthinkable even a hundred years ago, is available to you right here at the Design Center. Now every modern residence can include fabrics once rare and reserved for royalty, and everyone can enjoy the convenience, comfort, and beauty of modern textiles.

Laurel Sprigg, owner of Laurel Sprigg Inc, has been providing fine sewing for interior designers and architects since 1991. Known for the highest quality of workmanship, Laurel's creations have appeared in many publications, decorator showcases, and in the San Francisco, Seattle and Dallas Design Centers. Laurel is also a guest lecturer for the Interior Design Program at U.C. Berkeley Extension. She was recently the Chair of the Board of the Textile Arts Council, a support organization of the Fine Arts Museums of San Francisco, and remains on the board. www.laurelsprigg.com