



TAILORED SUIT The tailored suit is a garment for women consisting of a jacket and a skirt, most often made of the same fabric. This name for the garment appeared in the fashion press around 1885. It owes its name to the particular manner in which it is made. Produced for women by tailors who specialized in the making of men's garments, it came to prominence at a time when the norm was to differentiate men's and women's clothing by means of very specific techniques, forms, fabrics, colors, and designs. The fashion spread almost everywhere in Europe and the United States thanks to the fame of the English company Redfern, whose style was made popular by famous women, notably Queen Victoria. The Parisian branch of the company, established on the rue de Rivoli at the end of the nineteenth century, contributed to this success.

The emergence of this practical and functional garment within a previously uncomfortable and ostentatious female wardrobe shows the transformation in attitudes by Western society in the late nineteenth century. Women in search of new garments better adapted to ways of life connected to the industrial revolution and its resultant social transformations found the ideal garment in the tailored suit. Since the suit fit the requirements of such new forms of behavior as sport and travel, as well as the progress of hygiene, upper-class women played a role in its adoption by the general population. The affirmation of the suit by the urban middle class—primarily its emancipated women who took up professional careers—was the principal force behind its acceptance.

The tailored suit had a veritable genealogy, however, and was not created *ex nihilo*. In particular, women's riding costumes became fashionable in aristocratic circles in the late seventeenth century. The costume of English Amazons, made up of a fitted coat and a short skirt, in favor in the late eighteenth century, was already close in style to what would become the tailored suit. Although dresses made up the bulk of women's wardrobes, jackets and skirts, often matched, had been worn since the late sixteenth century by the urban working class.

This fashion spread in Enlightenment circles concerned with egalitarianism in clothing. Many details borrowed from men's clothing—buttons, pockets, colors, fabrics, and sometimes even pants—went along with the

jackets and asserted equality between the sexes, suggesting the future of the tailored suit. Throughout the nineteenth century, jackets matched with skirts or pants were worn as a kind of manifesto for the emancipation of women, and the costume thereby acquired a nefarious reputation. A few major female representatives of non-conformism and radicalism, such as George Sand, Flora Tristan, Amelia Bloomer, and Emmeline Pankhurst, gave it an almost political character.

Around 1850, the walking suit appealed to an urban society fascinated by nature and open space. This outfit made up of a jacket and a skirt that did not cover the ankles, in the age of crinolines and corsets, was the last avatar before the emergence and the success of the tailored suit.

The first suits that can truly be given the name were marked by the English influence that predominated in the late nineteenth century. British women, who launched the craze for sports, travel, and tourism, were the first to adopt them. London society, where feminists were influential, adopted the style, which incidentally corresponded to the sobriety admired by countries with a Protestant culture. These first tailored suits had jackets whose cut and details were borrowed from men's clothing, but their forms were adjusted to match the curves of the corset. Skirts, particularly for traveling, were slit or made with wide pleats in order to facilitate walking. Suits were worn most often with accessories influenced by men's clothing, such as vests, shirts with wing collars, and men's hats. From 1890 to 1914, under the influence of sports, their form became more flexible: skirts flared, and less fitted jackets were freed from masculine criteria and standards. The swift adoption of the tailored suit led to its presentation in a variety of forms, with short or long jackets, for summer or winter, and for holidays or urban life. Sober and practical, its use was nonetheless coded. The garment was worn during the day for occasions on which no convention was required (shopping, walking, visiting).

In the early twentieth century, the popularity of the tailored suit tended to make it the uniform of the middle classes. Young women employed in new professions, such as office workers and elementary schoolteachers, adopted it as a professional uniform.

Solid and protective, like a coat, the tailored suit was mass produced, and its price thus made it accessible to a broad clientele. Department stores made it into a sale item. World War I accelerated changes. The tailored suit spread, becoming the war uniform of committed women wishing thereby to show their patriotism. The fashion press galvanized its use, thereby bringing together male and female wardrobes as well as blurring class distinctions.

Haute Couture Becomes Interested

Couturiers expressed mistrust toward the tailored suit. The sober and comfortable appearance of the garment broke with the tradition of the ostentatious elegance of the Parisian houses. Similarly, the Anglo-Saxon influence was treated by the French fashion press with a certain contempt. The unquestionable superiority of London tailors in men's fashion was recognized, but there was firm opposition to any intrusion on their part into the universe of women's clothing. The first couturiers to introduce tailored suits in their collections in the early twentieth century were Jacques Doucet, Jeanne Paquin, and Paul Poiret, all creators who contributed to radical transformations in women's fashion. Jackets had a *Directoire* cut, a reminiscence of the eccentric elegance of the *Incroyables*. Coats, single-breasted and fitted, were high-waisted and usually made of fabric with broad stripes. However, when Paul Poiret launched the fashion for pencil skirts around 1911, after having liberated the torso from the corset, he imposed a new constraint, contrasting with the functional use of the suit.

Under the influence of the younger generation, from 1910 to 1925, the tailored suit became one of the favored garments of Parisian couture. Jeanne Lanvin, Gabrielle Chanel, and Jean Patou were the most ardent advocates of the new garment. The style of the Parisian suit set the tone for the rest of the world throughout the twentieth century.

Around 1910, the designs of Jeanne Lanvin blended the sporty informality of new men's fashion with youthful and refined elegance. The jacket was now worn open, revealing a simple blouse embellished with lace inserts, with a soft collar and no tie. Chanel, a beginner at the time, presented outfits made of soft jersey with an unfitted waist, large armholes, and short slit skirts facilitating walking. This very *avant-garde* version, which she had adopted from sports clothing, came together with the style imposed by the war in 1916. For her first advertisement, she chose three flowing suits with very short and flared skirts to show in *Vogue*.

The Garçonne in the Tailored Suit

The sobriety of dress prescribed by the state of war became the rule in the 1920s. The modern democratic suit was worn night and day. The woolen suit, in masculine style, adopted the new straight and short line. The jersey outfit was extremely popular. Made of knitted wool, silk, or cotton, it was worn with a sweater taken from sporty

and American fashions. The boldest of suits of the time was no doubt the pants suit. After a timid appearance around 1890 for riding bicycles, in the form of culottes or bloomers, in the 1920s it was worn as broad trousers with a navy blue jacket, exaggerating the masculine silhouette that was fashionable in the jazz age. Softer, made of silk or printed cotton, the beach pajama was an addition to the summer wardrobe. On the ski slopes, elegant women displayed, with a degree of insolence, outfits of jackets, tunics, and pants in mountain style, the most fashionable made by Hermès. The use of this androgynous outfit, however, remained confined to emancipated and eccentric circles, typical of California or French Riviera lifestyles. Outfits made of flowing silk, dressier, decorated with geometric or exotic designs in rainbow colors, provided a new and more feminine version of the suit. Similarly, the evening suit, lamé, embroidered, and glittering, indicated an unbounded love of partying after years of privation. Jean Patou was the most representative designer of the period; his style, influenced by American lifestyles, gave his suits, which had a masculine and sporty spirit, a singularity that appealed to *garçonne*s and was gradually more widely imitated. The strict, straight, almost geometric appearance of these suits achieved sophistication through the use of very refined accessories. The images of the American actress Louise Brooks wearing his suits in films and photographs perpetrate the influence of the modernist style of Jean Patou.

The Tailored Suit Advances

By the 1930s, the tailored suit had definitively entered the wardrobe of Western women, on many occasions replacing the dress as the garment of the bourgeoisie. Its sober appearance was reassuring, and it attenuated social, cultural, and even national differences. However, the cost of the garment made it hardly accessible to the working classes. It became the symbol of a degree of success for the middle class, worn by women at work as well as those who stayed at home. Often very subtle details, in terms of the quality of fabric, of cut, or of accessories, revealed the economic and social status of the woman who was wearing it.

Because of the economic crisis of 1929 and its political consequences in Europe, the rise of conservative and reactionary movements radically changed the image and the perception of the tailored suit. It lost its androgynous character for a newfound femininity.

The use of sporty suits, notably those made of jersey in favor in the 1920s, was limited to leisure activities. Beginning in 1931, the woolen suit worn in town emphasized feminine curves: it outlined the breast, emphasized the waist, and flared in widened basques on the hips. Skirts were longer and adopted a narrower line, created by pleats, darts, and complicated cuts. Suits often had a severe and feminine line, exaggerated by the adoption of shoulder pads. This almost martial style experienced its apogee in the success it achieved in the authoritarian and

totalitarian regimes of the period. Parisian couturiers, seized by the fad for neo-romanticism, decorated jackets in a manner increasingly distant from the original masculine cut, with lace, guipure, flowered-patterned linings, smocked shirtfronts, and jeweled buttons. The actress Marlene Dietrich stood out in contrast to this vogue, in which glamour and femininity went together, by appearing in films and in her life in men's suits made by the celebrated Austrian tailor Knize. In the 1930s and during the war, women in pants caused discomfort. The evening jacket, in a variant with a long dress, very fashionable in elegant circles, was the only exception to this general tendency. The suits made by Elsa Schiaparelli, influenced by the surrealist movement, with evening jackets richly embroidered with baroque and unexpected motifs, contributed notes of humor, derision, and refinement in a period that was conservative and conventional in taste.

In the postwar period, the style of Dior did not challenge this orientation. The New Look suits, with very feminine lines, were the continuation of a form of attachment to the past. The stiff jacket with broad shoulders, a fitted waist, and oversized basques was worn over wide pleated skirts, recalling the silhouettes of the eighteenth century and the Second Empire.

A Classic of Fashion

From 1955 to 1965, Parisian couturiers made the tailored suit their showpiece. They gave it a second wind by adapting it to the transformations of the consumer society. Balenciaga was the first couturier to dare to break with Dior's New Look. His single-breasted, full, and flowing jackets once again underemphasized the breasts and the waist, recalling the style of the 1920s. Similarly, Chanel suits, in tweed and colored woolens, were a modern version of the first styles that had made the house's name. In the early 1960s, the tailored suit became an absolute must, immortalized by Jacqueline Kennedy. Despite the boldness of mini-suits by Courrèges and the very colorful versions by Cardin, young women, in open rebellion, had little taste for the garment, preferring an explicitly rebellious wardrobe: leather jacket, mess jacket, cardigan, and work jacket, which they mixed and matched, rejecting anything that could in any way evoke a bourgeois uniform. For young women, the tailored suit embodied a fashion that resembled a yoke. Only the pants suit, whose ambiguous and androgynous character corresponded to the prevailing nonconformism, found favor in the eyes of young women who had made the liberation of mores a veritable battle cry. The denim or corduroy version was for those who wore it a symbol of political commitment. Yves Saint Laurent was able to echo this movement of rebellion in his collections: car coats, safari jackets, Mao jackets, and dinner jackets were modern versions of the tailored suit.

The 1980s saw a revival of the fashion for the tailored suit, associating a certain taste for the classic with a representation of the consecration of women in the

world of work. Armani's suits were hugely successful among executive women; those of Chanel enjoyed renewed favor as symbols of relaxed luxury and elegance; and suits by Thierry Mugler and Christian Lacroix were baroque and festive. This rebirth was only an apparent one because the tailored suit was gradually losing its *raison d'être* and being replaced by other garments. The uniform no longer appealed to women at a time when fashion was governed by the cult of youth; the jacket had become a free element, and it alone continued to develop. Pants suits, like those of Jean Paul Gaultier, can still express, in a society where clothing taboos have largely faded, a way for women to emphasize their difference and their particularity.

See also **Chanel, Gabrielle (Coco); Doucet, Jacques; Paquin, Jeanne; Patou, Jean; Tailoring.**

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TAILORING Tailoring is the art of designing, cutting, fitting, and finishing clothes. The word tailor comes from the French *tailler*, to cut, and appears in the English language during the fourteenth century. In Latin, the word for tailor was *sartor*, meaning patcher or mender, hence the English "sartorial," or relating to the tailor, tailoring, or tailored clothing. The term bespoke, or custom, tailoring describes garments made to measure for a specific client. Bespoke tailoring signals that these items are already "spoken for" rather than made on speculation.

As a craft, tailoring dates back to the early Middle Ages, when tailors' guilds were established in major European towns. Tailoring had its beginnings in the trade of linen armorers, who skillfully fitted men with padded linen undergarments to protect their bodies against the chafing of chain mail and later plate armor. Men's clothing at the time consisted of a loosely fitted tunic and hose. In 1100 Henry I confirmed the royal rights and privileges to the Tailors of Oxford. In London, the Guild of Tailors and Linen Armorers were granted arms in 1299. They became a Company in 1466 and were incorporated into the company of Merchant Tailors in 1503. In France, the tailors of Paris (*Tailleurs de Robes*) received a charter in 1293, but there were separate guilds for Linen Armorers and Hose-Makers. In 1588, various guilds for French tailors were united as the powerful *Maitres Tailleurs d'Habits*. Tailoring has traditionally been and

remains a hierarchical and male-dominated trade, though some women tailoresses have learned the trade.

Products

In the sixteenth and seventeenth centuries, tailors were responsible for making a variety of outer garments including capes, cloaks, coats, doublets, and breeches. They gave shape to them by using coarse, stiff linen and canvas for interlining, horsehair cloth and even cardboard stiffened with whalebone for structural elements. Imperfect or asymmetrical body shapes could be evened out with wool or cotton padding. Luxury garments were often lined with satins or furs to keep their wearers warm. Tailors were the structural engineers for women's fashions and made whalebone stays or corsets until the nineteenth century. Women largely made relatively unshaped undergarments and shirts for men, women, and children. The nineteenth-century tailor added trousers, fancy waistcoats, and sporting clothing of all sorts to his repertoire. The tailor was particularly adept at working woolen fabrics, which he shaped and sculpted using steam and heavy irons. Menswear had long used wool as a staple fabric. In Britain wool connoted masculinity, sobriety, and patriotism but in the early nineteenth century, it became extremely fashionable, almost completely replacing the silks and velvets used in the previous century. At the same time, men began to wear trousers rather than breeches and by the 1820s, tightly cut trousers or pantaloons could be worn as evening wear. Though they no longer made corsets, women's sidesaddle riding habits and walking suits remained the province of the tailor and were cut and fashioned from the same fabrics as male garments.

Early Tailoring Manuals

Because tailoring was taught by traditional apprenticeships, skills were passed on from master to apprentice without the need for written manuals. The most skilled aspect of the trade was cutting out garments from the bolt of cloth. In G. B. Moroni's painting *The Tailor* (c. 1570), the fashionably dressed artisan prepares to use his shears on a length of cloth marked with tailor's chalk. These markings would probably have been based on a master pattern. The earliest tailors used cloth patterns because paper and parchment were too expensive at this period. Paper patterns became widespread and commercially available in the nineteenth century.

The earliest known tailoring manuals are Spanish. These are Juan de Alcega's *Libro de Geometric Practica y Traca* of 1589 and La Rocha Burguen's *Geometrica y Traca* of 1618. These books illustrate ways of drawing patterns to use fabric in the most economical manner, but have no information on technique. Later manuals, such as the important *L'Art du Tailleur* by de Garsault (1769) have more detailed instructions as to measurement, cutting, fit, and construction. The typical workshop had a master tailor, who dealt directly with the client and cut out garments. There might be several cutters in a large es-

tablishment and they were at the top of the tailoring hierarchy, for cutting out was the most skilled part of the trade. Under them other journeymen tailors were responsible for a variety of activities, including padding and sewing in interlinings, pockets, and the difficult task of assembling the sleeve and turning the collar, as well as manipulating the heavy shaping iron called a goose. Apprentices were usually responsible for running errands and sweeping up scraps of fabric before being taught basic sewing skills. When sewing machines were introduced, machinists, who might be women, were also added to the workshop floor. The tailors who sewed the garment together sat on a workbench near natural light with legs crossed, hunched over their work. To sit cross-legged in French is still to be *assis en tailleur*, or sitting in the tailor's pose.

The first manual in the English language is the anonymous *The Taylor's Complete Guide*, published in 1796. After this publication, there were many important manuals produced during the nineteenth century, including Compaing and Devere's *Tailor's Guide* (1855) and most importantly, E. B. Giles's *History of the Art of Cutting* (1889) which has been reprinted and provides great insight into the nineteenth-century techniques from a master tailor who knew many of its practitioners personally.

A spirit of competition and enterprise marked the first half of the nineteenth century, when tailors patented a multitude of inventions, manuals, systems of measurement, and fashion journals aimed at the man-about-town and his tailor. Some of the most important of these were the *Tailor and Cutter* and *West-End Gazette*. The endless cycles and revivals of women's fashions seemed illogical and capricious compared to the more rational, linear, and technologically innovative development of men's dress. The finest tailoring combined the principles of science and art to produce clothing that was both engineered and sculptural.

Measurement

Systems of measurement changed radically during the history of tailoring. Tailors have always had the difficult task of creating three-dimensional garments for asymmetrical and highly varied body shapes. Unlike static sculpture, garments also had to allow the wearer to move freely and gracefully during their daily pursuits. Early tailors developed complex systems for measuring the bodies of their clients. However, as most manuals observe, no system could replace the observant eye and hand of the tailor, who noted the more subtle nuances of his client's posture and anatomy and could make allowances for a slight hunch, uneven shoulders, or a protruding stomach. In his tailoring manual of 1769, de Garsault illustrated the strip of paper he used for taking measure. His system involved cutting notches in the strip to measure the breadth of the back and the length of the arm to the elbow. Each client was measured against shifts in his own body's size and shape.

The modern tape measure was introduced in about 1800. In Britain, cloth had been accurately measured in ells (short for elbows), but the body was not quantified in units. In post-revolutionary France the metric system was used to measure the body, whereas British tailors favored inches. The tape measure was soon joined by a compass, ruler, and tracing paper to produce elaborate geometric systems used throughout the nineteenth century. These mathematical patterns could be produced in scaled sizes and were designed around the more abstract idea of a bodily norm or average. In their most elaborate forms these systems used machines like Delas's somatometer or body meter of 1839, which was an adjustable metal cage for measuring the bodies of clients. Entrepreneurs who used them to produce ready-made clothing in standardized sizes gratefully appropriated systems designed to ensure a more accurate fit. Reporting on the inroads made by ready-made tailoring exhibited at the 1867 World's Fair in Paris, Auguste Luchet wrote that the age of the sculptural tailors was over: "There are no more measurements, there are sizes ... Meters and centimeters. One is no longer a *client*, one is a *size eighty*! A hundred vestimentary factories are leading us toward the absolute and indifferent uniform." Though loosely fitting, ready-made clothing for the lower classes had existed since the seventeenth century, the nineteenth century saw the introduction of high-quality, fitted tailored garments sold off the rack.

Shop Displays

The fully equipped tailor's establishment of the nineteenth and twentieth centuries could be sparsely or luxuriously fitted. The basic requirements of the trade included shelving for the display of cloth bales, a counter where swatches could be consulted, a space where the client could be measured, a fitting room with mirrors, a sturdy table for cutting out, and possibly blocks for saddles to fit riding clothes properly. Fashion prints were also hung as decoration or shown to clients as models. The shop might or might not include a space for workshops. More prestigious firms made garments on the premises while "jobbing" tailors sent bundles of pieces to outworkers, often women, who would assemble the garments at home or in sweatshops. At the top end of the scale, establishments like Henry Poole on Savile Row at the turn of the twentieth century combined more functional elements with the thick carpets, mahogany fittings, satin upholstery and gilded mirrors of the palace or exclusive gentlemen's club. In the twentieth century many tailors kept traditional interiors, though some, like Simpsons of Piccadilly and Austin Reed innovated with modern, Art Deco, or Bauhaus styles and included amenities such as barbershops. In the middle of the nineteenth century, the tailor was joined by hosiers, who specialized in high-end accessories and outfitters, whose trade was based on made-to-measure shirts, but who also sold suits, coats, hats, boots, and all manner of accessories. Their

shop window displays tended to emphasize orderliness and neatness to appeal to the male customer.

Tailoring in the Twentieth Century

Bond Street, Savile Row, and St James's Street in the fashionable West End of London have been the center for elite, traditional tailoring since the turn of the eighteenth century. However, tailoring spanned the whole class spectrum, from tailors with royal warrants to immigrants working in the warehouses of the East End.

One of the most important shifts in Savile Row tailoring was the transition from a more traditional client base of British gentry and aristocracy to a more international, clientele including American financiers and eventually Hollywood celebrities. Though Savile Row rose to prominence in the late eighteenth century, dressing such figures as the Prince Regent and dandy Beau Brummel, in the twentieth it created the movie wardrobes of Fred Astaire, Cary Grant, and Roger Moore. Though many American stars sought the cachet of Savile Row, there were very talented tailors in the United States. In Harlem, the exaggerated shapes and bright colors of the zoot suit were launched by stylish young black men in the mid-1930s. When the War Production Board tried to curtail this "antipatriotic" tailoring because of wool rationing in 1942, race riots ensued. In Britain, there was a brief revival in elegant Edwardian tailoring after World War II, when so-called Teddy Boys—working-class men who spent large sums on their wardrobes—adopted it. In 1960s London, fashionable men's goods were democratized in the "Peacock Revolution," which saw the center of fashion gravitate toward Carnaby Street and the King's Road—along with Cecil Gee, John Stephen, John Michael, John Pears, Michael Rainey, and Rupert Lycett Green. One of the most important figures in the rejuvenation of menswear was the celebrity tailor Tommy Nutter. He created unique suits for both men and women, including suits for the Beatles, Mick and Bianca Jagger, and Twiggy.

In the 1980s, Italian tailoring began to receive more attention on the international fashion scene. With their "unstructured" suits, designers such as Giorgio Armani catered to a desire for more informal, lighter weight garments for both men and women. At the turn of the millennium, the Italian tailoring firm Brioni dressed the British movie icon James Bond, played by the actor Pierce Brosnan. In Britain, a new generation of designers combine the flawless cut and construction of traditional tailoring with the flair of haute couture. Oswald Boateng is an Anglo-Ghanian whose work displays a dazzling sense of color and who prefers to describe his work as "bespoke couture." Alexander McQueen, who trained for a short two years on Savile Row, also incorporates tailoring's emphasis on structure and materials into his couture womenswear.

Though it represents a very small part of the contemporary menswear market, custom tailoring still has

pride of place in the wardrobe of the sharply dressed man. Whether it applies to computer software or kitchens, the expression “tailor-made” still carries positive connotations of individualized, customized service. In the clothing trade, as long as the suit remains the classic form of formal attire, tailors will elegantly dress their clients. These may include men whose bodies may not fit the norms of the ready-made clothing industry, as well as royalty, businesspeople, or celebrities who turn to the tailor for a classic or innovative suit of clothing made to their precise measure.

See also **Armani, Giorgio; Cutting; Savile Row; Sewing Machine; Suit, Business.**

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TANNING OF LEATHER It would not be an exaggeration to call leather the first human industry, since the wearing of animal skins goes back to the beginning of human existence. Before early humans mastered the art of weaving, skins from animals slain for food (with and without the fur) were utilized for garments, footwear, headgear, and protective clothing, as well as a host of practical applications, and were linked to warmth and to humans' very survival.

Before domestication of cattle and pigs, skins of deer and wild animals, as well as wild sheep and goats were dressed. Paleolithic cave paintings depict figures wearing skins and furs, and excavations at these sites have revealed an active leather industry. Flint instruments, including knives, scrapers, and awls used for removing flesh, have been found in addition to wooden poles and beams used for beating and draping hides. Later Neolithic and Bronze Age sites have yielded leather dagger sheaths, scabbards, shields, footwear, and jerkins of a sophistication that indicates that leather manufacture was mastered early in human history.

As humans learned to domesticate cattle, horses, sheep, goats, and pigs, the availability of raw materials for leather production swelled. Uses of leather by ancient peoples included all types of clothing, belts, thongs, footwear, headwear, gloves, ties, bags and vessels, armor, sheaths, packs, seat covers, saddles, animal trappings, tents, and even sails for ships. Excavations of Sumerian peoples at Ur of the Chaldees brought to light extraordinary leather tires used on wooden wagons. In the early 2000s, the Masai women of Africa were clad in cloaks and petticoats of leather, which harkened back to the earliest years.

Traditional Tanning Methods

Prehistoric humans quickly discovered that raw skins removed from the animal needed to be treated before they could be useful. Indeed, leather is a manufactured product that requires many steps. The series of chemical processes by which natural skins are converted to leather is known as tanning. The object of tanning is to render natural skins impervious to putrescence while imbuing them with greater pliability, suppleness, and durability. Early tanning methods employed natural substances, in contrast to modern manufactured chemicals.

However, before tanning can occur, the skins must be clean. Hides are washed of blood and dung and the hair removed. This process is not actually tanning, but a necessary preliminary step done by early peoples in a variety of ways. Some utilized alkaline substances to loosen hair, such as lime found in ash; others utilized urine to accelerate putrefaction and hair loosening; while still others such as the native Inuit peoples employed the enzymes in saliva via the chewing of skins. All cultures have employed stages of stretching and scraping of skins to remove flesh and hair prior to the actual tanning process.

The three historical methods of making leather are vegetable, oil, and mineral tanning. Oil tanning is considered to be the oldest process, probably employed in combination with smoke curing. Neolithic excavations have revealed elk and deerskins dressed with oil and smoked. Traditional oil tanning methods employ fish oils (of which cod oil is the most important) or animal fats worked (“stuffed”) into the hides to bring about oxidation, transforming skin into leather. Variations of oil tanning include the milk and butter used by nomads of Central Asia (Kyrgyz) and egg yolk tanning by peoples of northern China. Native Americans of North America are known to have tanned leather with a mixture of brains and oil. Smoke curing in pits has a long tradition in China.

Vegetable tanning, a 4,000-year-old process, was developed widely across the world by ancient peoples utilizing their own local flora. Plants containing tannins (compounds of gallic acid) infused in water were discovered as early as the Paleolithic period to affix to skins forming an impenetrable substance. Egyptians preferred using the mimosa plant for tanning purposes, while peo-

ples of the ancient Mediterranean employed sumach leaves. Oak (and pine) bark, nuts, and galls have been the most important sources for tanning compounds in Europe, practically until the advent of chemical processes in the nineteenth century.

Mineral tanning, until the modern age, meant alum. Ancient peoples mined alum for tanning skins in a process that became known as tawing. Tawed leather produced a supple, distinctive white leather and developed into a specialized guild in medieval Europe. Alum-tanned leather was developed to a particularly high standard in the Near East. The Moors, who conquered Spain in the eighth century, brought with them their expertise in this process; and the precious leather goods they produced, referred to as cordovan or cordwan, were indelibly associated with the city of Cordova, Spain, giving rise to the name of the leather shoemakers in England, known as cordwainers. Combination tanning, utilizing more than one method, was also exploited in making leather.

The importance of leather goods in all aspects of daily life made it a highly desirable trade item. Primitive peoples who needed leather for clothing, weapons, and other applications bartered goods for leather products. Leather became so vital to the flourishing of communities that it progressed into a form of currency. It has been used as money continuously throughout history. The historian Seneca noted that Romans used stamped leather money in 2 C.E.; so did the ancient Chinese early in the second century B.C.E. Even in sixteenth century Russia, leather pieces stamped with Czar Ivan IV's symbol were being used until metal currency took hold during the reign of Peter the Great.

Decorating Leather

While leathers were often left with their simple tanned finish, the urge to color and embellish tanned leather has an equally early history. Coloring leathers was achieved through animal, but predominantly vegetable, dyes in combination with metal salts. Tawed leather accepts dye well and was a skill refined by ancient Phoenicians and Egyptians as indicated by the find of a 4,000-year-old fragment of leather dyed with kermes. Egyptians also employed safflower to stain leather. Indigo, woad, buckthorn, and hollyhocks were at various times utilized to dye leather in combination with mineral mordants. In addition to coloring, leather has also been decorated by peoples around the globe in various ways, including tooling, painting, embossing, pleating, perforating, plaiting, and embroidering to suit their tastes.

Modern Tanning Methods

Interestingly, the tanning of leather was one of the last industries to lift itself out of medieval conditions in the nineteenth century. Before then, methods had endured for centuries. Modernization since the late nineteenth century, however, has been swift and complete, and what used to be a craftsman's art has become increasingly a

science handled by technicians. Mechanization has brought significant changes in speed and efficiency. Prior to specialized drum machinery, liming the skins, tanning, and dyeing was manipulated by hand. A wider range of tanning materials has also been introduced. Mineral tanning through chromium salt, which produces a supple, versatile leather, is by far the most widely used method of tanning in the early twenty-first century.

Even more significant are the myriad new methods of dyeing and finishing that have revolutionized the modern leather industry. Since their invention in 1856, aniline (synthetic) dyes have become universally standard in dyeing leather, producing an enormous range of colors and shades. This had a major impact on leather fashions in the twentieth century, bringing about innovative new looks hitherto unknown in natural leathers. Like dyes, finishing methods have revolutionized leather fashion. In the early 2000s, imperfect skins of any type—cow, pig, sheep, and goat—can be made to look identical to any other skin through sophisticated finishing processes such as sanding, plating, embossing, dyeing, and spraying. Pigskin, traditionally tough and used for shoe leather, has become an important and versatile garment leather through the modern finishing treatments, which represents a huge export product for China. Bulk industrial tanning is done less and less in Western Europe and America, having been shifted to India and the Far East, for economic reasons.

Some of the finest leather continues to be tanned by traditional methods, although it represents a tiny fraction of leather produced in the early 2000s. Among the most superior fashion and upholstery leathers are those processed by traditional vegetable tanning, piece-dyed by hand, and rubbed with oils to achieve a rich finish. Much of this luxury leather is produced in France and Italy, although a new industry is emerging in South America aimed at the high-end garment and fashion accessory market.

See also **Leather and Suede**.

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Lauren Whitley

TAPA. See **Bark Cloth**.

TAPESTRY Since early medieval European times tapestry's major purpose has been well-established as the making of large pictorial wall hangings. This use of a 3000-year-old textile structure has been held as standard, particularly in western society, right through to the twentieth and twenty-first centuries.

Out of central Asia and over many centuries the kilim rug, using the same woven structure, has established a highly respected role as a religious, decorative or a simply functional floor covering, and domestic application abounds in the modern world. One should recognize, too, tapestry as an upholstery fabric for chairs and sofas, not an inconsiderable application in the eighteenth, nineteenth, and into the twentieth century.

However, as recently as the late 1990s, the discovery of woven garments in burial sites in a remote area of central Asia—garments with extensive use of woven tapestry as part of their construction—further identifies what can be argued as tapestry's widest application over world history: tapestry as clothing. These particular garments date from between 200 B.C.E. and 200 C.E. and were unearthed from sites in the remote town of Shānpula, once part of the ancient southern silk route. They are woolen skirts and have graphic pictorial bands as inserts, set horizontally around the entire circumference and range between 2 to 8 inches (5 to 20 cms) high. When considered alongside the use of tapestry in the woven tunics of Coptic Egypt, in the application of diverse items of clothing in pre-Columbian Peru and the knowledge of Chinese Kessi or silken tapestry robes, there is reason to believe that this medium had a wide purpose beyond that of creating wall hangings. This is not in any way to diminish the richest of history of the mural tapestry; rather, it is to recognize that the evidence we have of dry desert-like conditions (Egypt, coastal Peru and the Mongolian region) having preserved such clothing, this application could have been even more widespread in less protective climates.

In Egypt, roughly between 300 to 800 C.E., the Copts, a Christian sect in that country, are known for the application tapestry to clothing. This process was employed particularly in the construction of linen cloth garments where passages of colored wool and undyed linen tapestry were woven as an integral part of the plain all linen cloth in the form of roundels, rectangles and vertical bands. Such garments, simple rectangular sleeved tunics, were clearly in regular use. As wear took place on more vulnerable areas of the plain linen cloth, the tapestry passages, with their highly evolved, sophisticated and complex imagery, would be cut out and patched onto entirely new plain woven tunics. That they were subsequently used as burial garments after frequent daily use suggests that such tunics were of significant value to the wearer. There is also strong argument to suggest that this developed skill of woven tapestry, which was also employed in complex wall hangings in religious and cere-

monial architecture in Egypt, has direct links to the emergence of the large mural tapestries in northern and western early medieval Europe. However there is little or no evidence to suggest that tapestry as clothing made this northern journey.

In South America, particularly in the coastal and western Andes region that is now Peru, and during the period between 200 B.C.E. and 1600 C.E., tapestry vestments were clearly widespread in use. These were short, square, sleeveless tunics of a seemingly military, almost heraldic appearance. They were often of an entirely tapestry construction, sometimes of simple contrasting checkers or of an extremely evolved figurative iconography which could be seen as complex pattern to the less experienced viewer. The range of application was for domestic, ceremonial, regal, military or symbolic use, for identifying groups of individuals and as burial clothing. They were used as tunics, mantles, masks, hats, belts, shrouds, shoes, even gloves. And the technical skills employed in the weaving were of the highest order, of great inventiveness and on a level that is hardly understood, let alone practiced in the early twenty-first century.

Given the extensive history here described, it is surprising that in the early twenty-first century and particularly in the world of high fashion, tapestry has virtually no presence. There may have been brief individual experiments that never emerged to sufficient degree except to hint at a potentially rich vein of expression. One example may have been a gentleman's tapestry vest (waistcoat) worn by the designer that was made of complex pattern in black, gray, white and much silver metal. It was quite stunning but most often concealed behind a nondescript button jacket. In London two of the ancient guilds, that of the wax chandlers and the cappers and felter, in the 1960s and 1970s made ceremonial robes for their chief office bearers. Both garments were full length silk with quite extensive tapestry woven insets. The main dignitaries of London's Royal College of Art wore black silken robes. The collar, which is some 16 inches (40 cms) square and hangs down the wearer's back, depicts a stylized phoenix bird in sparkling gold metals, (the college symbol), while the robe's front facings fall all the way to the floor. These are wide, flame-like golden bands, even having extensions to fit the height of different dignitaries.

Perhaps the nearest approach to tapestry as clothing in the western world emerged at the peak of medieval tapestry. Great skill and design was employed in illustrating the nature of the complex vestments of the individuals illustrated in that period. By the use of wool, linen, and silk the cloaks, robes, tunics, hats and hose imitated all fabrics and fashions of the relevant period. This practice was employed to such a degree that, if not otherwise known, the precise dates of the making of these tapestries can be established. The extremely labor intensive nature of this ancient craft—tapestry—makes it very costly cloth for the smallest areas.

See also **Africa, North: History of Dress; America, South: History of Dress; Textiles, Byzantine; Textiles, Chinese.**

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Archie Brennan

TARTAN This cloth has powerful connections with often-romanticized notions of Scottish identity and history. Tartan has also been widely used as a fashion textile owing to the appealing and distinctive nature of its various patterns, which are known as *setts*.

Origins and Development

The precise origins of tartan are not known; however, a fragment found in Falkirk, which dates from the third century C.E., suggests that simple woolen checked cloths existed in Scotland at an early period. Complex patterning of the type now associated with tartan did not exist in Scotland until the sixteenth century. Hugh Cheape discusses the origins of the name tartan as follows:

The word “tartan,” probably French (from the word *tiretaine*), was in use early in the sixteenth century.... It seems likely that in some way that we can’t now trace, this word came to describe the fabric we now call tartan. (p. 3)

Contrary to contemporary popular belief, tartan patterns have no traceable historical links with specific Scottish families or clans. These associations developed from the early nineteenth century, when they were actively promoted by historians and writers, as well as woolen manufacturers and tailors. Tartan, however, was by 1600

established as part of the culture of the Highlands of Scotland. It was widely worn by all levels of that society and it formed a distinctive element of Highland dress, which was largely based around the plaid or *breacan*. Men wore the plaid belted, and women adopted it as a large shawl. Up until the late eighteenth century, the *setts* worn were largely determined by the locality and the tastes of the weaver and purchaser.



In 1746 the following law was passed:

[N]o man or boy within . . . Scotland, shall, on any pretext whatever, wear or put on the clothes commonly called Highland clothes (that is to say) the Plaid, Philabeg, or little Kilt, Trowse, Shoulderbelts, or any part whatever of what peculiarly belongs to the Highland Garb; and that no tartan or party-colored plaid or stuff shall be used for Great Coats or upper coats, and if any such person shall presume after the said first day of August, to wear or put on the aforesaid garments or any part of them, every such person so offending . . . shall be liable to be transported to any of His Majesty’s plantations beyond the seas, there to remain for the space of seven years. (Disarming Act of 1746)

Culloden and After

The battle of Culloden in 1745 was the last stand in the campaign by supporters of the Catholic Prince Charles Edward Stuart, to form a challenge to the ruling Hanoverian King, George II. Owing to his family’s Scottish origins and the support he had from the largely Catholic Highlanders, the “Young Pretender” promoted Highland dress as the uniform of his Jacobite army. This led to tartan being associated with political rebellion and sedition and to its proscription under the Disarming Act of 1746. Under this act, the wearing of tartan was forbidden, with the penalty of possible transportation for seven years. In addition to the brutal repression that followed Culloden, these measures, which lasted until 1782, began to put an end to the distinctive Highland way of life.

The fact that tartan survived this period of dramatic social and political change was also linked to the actions

of the British government. After Culloden, a systematic effort was made to divert Highlanders away from Jacobite adventure and toward the cause of British imperial war. The Highland regiments formed at this period were exempt from the ban on Highland dress, and the British establishment decided to make use of tartan in their uniforms to encourage martial kinship amongst their recruits. The Highland regiments' involvement in British imperialist expansion, and the fact that their role was somewhat over-represented in imagery, helped to spread the popularity of tartan internationally. New military *setts* were designed by tartan manufacturers beginning in 1739 with the original "government tartan," a design of green, blue, and black, usually known as the Black Watch.

From the early nineteenth century tartan began to be internationally recognized as representative of Scottish, rather than merely Highland Scottish, identity. Its popularity was linked to romanticized notions of Scottish history put forward by writers such as the poet James MacPherson in his dubious translations of the work of the Gaelic bard Ossian. The more credible literary works of Sir Walter Scott also increasingly captured the public imagination. Scott played a significant role in orchestrating the well-publicized visit of King George IV to Edinburgh in 1822, during which the monarch appeared in a version of full Highland dress. This royal endorsement of tartan was continued from the 1840s by Queen Victoria, and was a great stimulus to its fashionability in Britain, France, and elsewhere.

Manufacture and Design

From the mid-eighteenth century, tartan design and manufacture began to be carried out within large-scale commercial enterprises, rather than primarily being the concern of local weavers. The firm Wilson's of Bannockburn was the most prominent tartan manufacturer from the mid-eighteenth to the mid-nineteenth centuries and Cheape claims that they "were mainly responsible for creating tartan as we know it today" (Cheape, p. 52). Their archive indicates that they catered to a fashionable market eager to consume new patterns named either after ancient clans or popular Scottish figures such as Sir Walter Scott. In addition to their prodigious innovation in tartan design, they also contributed to the modernization of tartan manufacture by "regularizing the sett, colors, and thread count" involved with each design (Rawson, Burnett, and Quye, p. 20).

Throughout the twentieth century tartan retained its role as both an internationally recognized symbol of "Scottishness" and as an attractive fashion textile. Tartan is currently widely worn by Scots as Highland dress on formal occasions and also to sporting events. Since the 1970s tartan has featured in the subcultural dress of skinheads, rockabillys, and punks, as well as being prominent in the work of international designers such as Vivienne Westwood, Jean Paul Gaultier, and Alexander McQueen.

See also **Kilt**; **Scottish Dress**.

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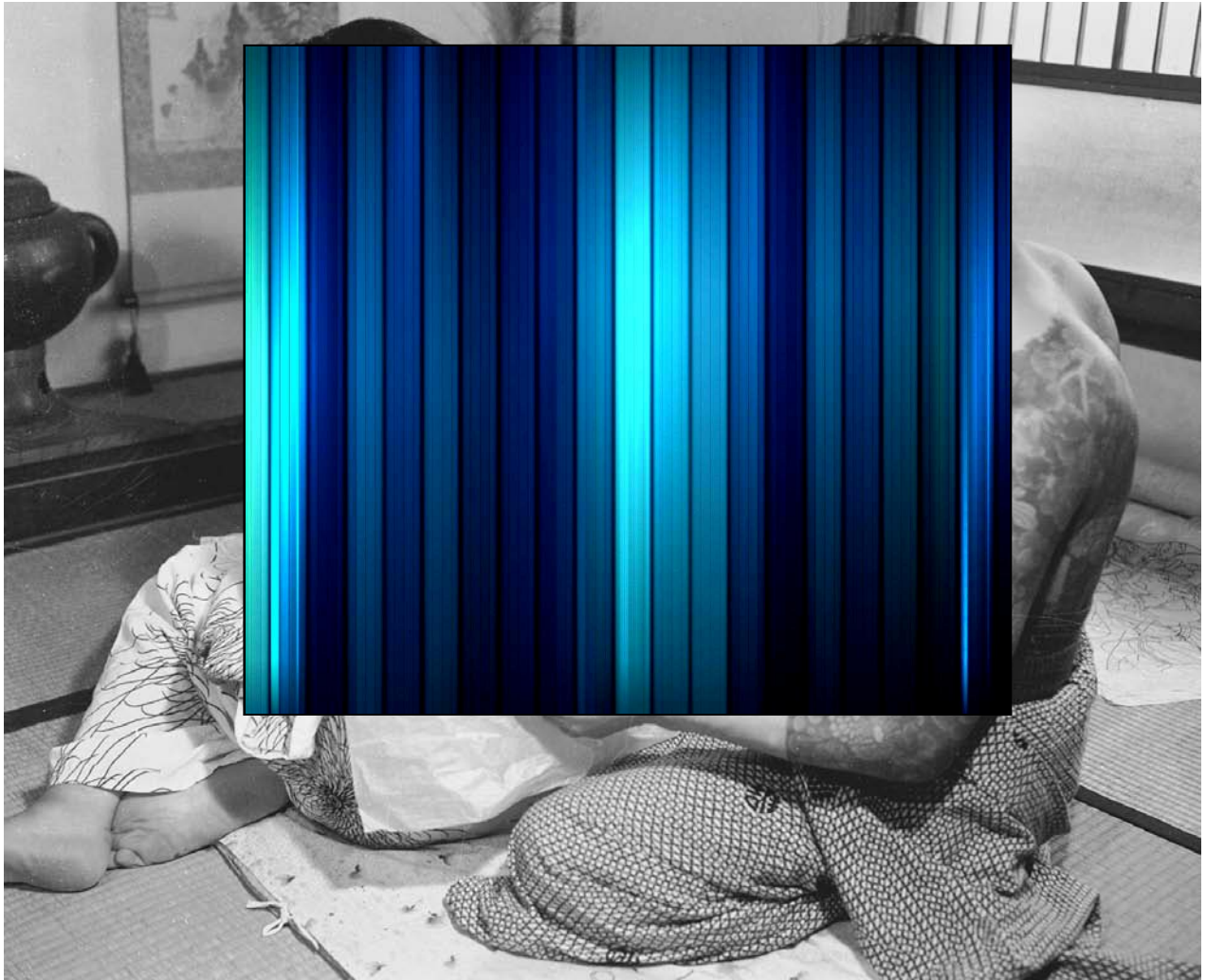
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Fiona Anderson

TATTOOS Tattooing is a process of creating a permanent or semipermanent body modification that transforms the skin. The word tattoo comes from the Tahitian *tatau*, which means "to mark something"; it is also hypothesized that the term comes from the sound the tatau sticks make when clicking together to mark the skin with ink. Tattooing is a process of puncturing the skin and depositing pigments, usually indelible ink, by a variety of methods beneath the skin to create a desired design or pattern. Tattoos range from "blackwork," large areas of heavy black ink in designs, to fine details and elaborate color schemes including fluorescent inks.

Historic Tattoos

The earliest evidence of tattooing includes tattooing tools and tattooed mummies. At 10,000-year-old sites in Tan-zoumaïtak, Algeria, tattooing instruments used for puncturing the skin were found with the female tattooed mummy of Tassili N'Ajje. In 1991, Ötzi, a Stone Age male mummy, was found in the Ötztal Alps, bordering Austria and Italy. This mummy had numerous tattoos, which were hypothesized as being used for medicinal cures, spiritual ceremonies, or indicating social status. Two well-preserved Egyptian mummies from 4160 B.C.E., a priestess and a temple dancer for the fertility goddess Hathor, bear random dot and dash tattoo patterns on the lower abdomen, thighs, arms, and chest. In 1993, a fifth-century B.C.E. Ukuk priestess mummy, nicknamed the Siberian Ice Maiden, was found on the steppes of eastern Russia. She had several tattoos believed to have had medicinal, spiritual, and social significance. Most of the 4,000-year-old adult mummies from Xinjiang, China, had tattoos that related to their gender or social position.



A Japanese artist tattoos a pattern to a customer's back, 1955. These elaborate and symbolic Japanese tattoos became a popular fashion during the late eighteenth to nineteenth century. © BETTMANN/CORBIS. REPRODUCED BY PERMISSION.

Classical authors have written about tattoos used by the Thracians, Greeks, Romans, ancient Germans, ancient Celts, and ancient Britons. Tattooing has been practiced in most parts of the world, although it is rare among people with darker skins, such as those of Africa, who more often practice scarification and cicatrization. Scholars hypothesize that tattooing was a permanent version of the desired aesthetic of body painting. Motivations, meanings, and exact techniques relating to tattoos vary from culture to culture. Tattoos have emphasized social and political roles; indicated cultural values and created an identity for the individual; reinforced aesthetic ideals; encouraged sexual attraction; eroticized the body; served medicinal and healing roles; communicated group affiliation or membership, and emphasized ritual and spiritual roles and customs of a culture.

Polynesia. In 1787, a French expedition led by Jan Franoise de la Perouse landed on Samoa and reported the

men's thighs were heavily painted or tattooed, which gave the appearance of wearing pants. Samoan tattoos were applied with ink, tattoo combs, and hammer. Male tattoos had larger black areas than females, who had lighter, more filigreed lines.

Borneo. In the nineteenth century, Americans with tattoos were sailors and naval personnel, who wrote about their tattoo experiences in ships' logs, letters, and journals. During World Wars I and II, some U.S. soldiers and sailors decorated their bodies with tattoos. Usually these tattoos were from a set of stereotypical symbols—courage, patriotism, and defiance of death—later referred to as “flash.” In the early 2000s, flash includes a wide variety of stock art used for tattoos.

Central America. In the nineteenth century most of Europe did not allow tattooing because the Catholic Church admonished it. However, tattooing flourished in Eng-

land, due primarily to the tradition of tattooing in the British Navy. Many British sailors returned home with tattoos that commemorated their travels, and by the eighteenth century most British ports had at least one tattoo practitioner in residence.

In 1862, Prince Edward of Wales had a Jerusalem cross tattooed on his arm to commemorate his visit to the Holy Land. Later, as King Edward VII, he acquired additional tattoos, and even instructed his sons, the Duke of Clarence and the Duke of York (King George V), to obtain tattoos to commemorate their visit to Japan.

In 1941, the Nazis registered all prisoners entering the Auschwitz concentration camp who were not ethnic Germans with a tattooed serial number. This tattoo was first placed on the left side of the chest; later, the location was moved to the inner forearm.

Contemporary Tattoos

During the latter part of the twentieth century, tattoos were primarily utilized by microcultures, such as motorcycle gangs, street gangs, and punks. In the twenty-first century, tattoos have gained popularity in Western culture and become commonplace and even fashion statements.

At the same time, some microcultures, such as the Modern Primitives, have sought alternative and perhaps more extreme tattooing methods and designs. Often these methods and designs have been borrowed from anthropological texts about ancient cultures and related tattooing practices. There are tattoo practitioners who specialize in “tribal tattoos” and “primitive technologies.” “Tribal tattoos” are typically heavy black ink and focus on designs that resemble Polynesian designs, ancient Celtic knotwork, or archaic languages. “Primitive technologies” include a wide variety of manual tattoo application methods, such as sharpened bones and ink; bone combs, hammer and ink; and tatau sticks and soot-based ink. These methods require lengthy tattooing sessions even for the smallest tattoos.

Electric Tattooing Practices

In 1891, the first electric tattooing implement was patented in the United States. In the early twenty-first century, many tattoos are applied in tattoo parlors using hand-held electric tattooing machines controlled by a foot pedal. These machines have a needle bar that holds from one to fourteen needles. The type or specific area of the tattoo design being worked on determines the number of needles. A single needle is used to make fine, delicate lines and shading. Additional needles are used for dense lines and filling with color. Even with the use of all fourteen needles, large or heavily detailed tattoos could take several months to complete.

Each needle extends a couple of millimeters beyond its own ink reservoir, which is loaded with a small amount of ink. Only one color is applied at a time. The tattoo practitioner holds the machine steady and guides the dye-

loaded needles across the skin to create the desired pattern or design. A small motor moves the needles up and down to penetrate and deposit ink in the superficial (epidermis) and middle (dermis) layers of the skin.

Tattoo Health-Related Risks

Licensed tattoo establishments are required by law to take measures to ensure the health and safety of their clients. Since puncturing the skin and inserting the inks cause inflammation and bleeding, precautions are taken to prevent the possible spread of blood-borne infections, such as hepatitis B and C. Rooms used in the tattooing process are disinfected before and after each client. An autoclave, a regulated high-temperature steamer that kills blood-borne pathogens and bacterial agents, is used to sterilize the needle bar and reservoirs before each tattoo session. Sterile needles are removed from individual packaging in front of the client. The area of skin to be tattooed is shaved and disinfected by the tattoo practitioner. During the tattooing process, the skin is continually cleaned of excess ink and blood that seep from punctures with absorbent sanitary tissues.

Tattoo Removal

Tattoos have become part of fashion trends, resulting in the need for effective tattoo removal. Past methods of removing tattoos have often left scars. Tattoo removal with laser technology has become the most effective method used and has a minimal risk of scarring. Despite advances in laser technology, many tattoos cannot be completely removed, due to the unique nature of each tattoo. Successful tattoo removal depends on the tattoo's age, size, color, and type, as well as the patient's skin color and the depth of the pigment.

Semipermanent and Temporary Tattoos

Cosmetic tattoos are semipermanent makeup, such as eyeliner and lip color, tattooed on the face. These tattoos use plant-derived inks that are deposited in the superficial skin layer, resulting in a tattoo that lasts up to five years. Temporary tattoos come in a wide variety of designs and patterns. Unlike permanent and semipermanent tattoos, most temporary tattoos can be applied and removed by the wearer. These tattoos are burnished onto the skin and secured with an adhesive. Most temporary tattoos can be removed with soap and water or acetone, depending on the adhesive. Another type of temporary tattoo is henna or *mehndi*, which is a shrublike plant that grows in hot, dry climates, mostly in India, North African countries, and Middle Eastern countries. The leaves are dried, ground into a powder, and made into a paste, which is applied in desired designs to the skin. After several hours of drying, a reddish-brown stain temporarily tattoos the skin. This tattoo begins to fade as the skin exfoliates and renews itself.

See also **Body Piercing; Scarification.**

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Theresa M. Winge

TEA GOWN The tea gown is an interior gown that emerged in England and France in the 1870s at a time when increased urbanization affected social behavior. The growing number of etiquette manuals and lady's periodicals produced at this time contributed to the revival of teatime by the middle classes and to the adoption of a whimsical type of gown worn by hostesses in their homes at five o'clock tea. Marked by Victorian eclecticism, this unique gown often incorporated elements of fashionable European dress from previous centuries, with exotic fabrics and stylistic components of foreign dress. The tea gown provided respectable women with an outlet for fantasy and innovation within the codified system of nineteenth-century dress and behavioral codes.

The nature and origin of teatime had considerable impact on the development of tea gowns. As tea was worth its weight in gold at the time of its introduction in Europe in the early seventeenth century, its consumption was reserved for the elite. Although this exotic beverage had become widely accessible in Europe and America by the mid-eighteenth century, tea drinking had been established as a class-conscious social event through which a network of selected individuals attained group membership. A sign of hospitality and politeness, serving tea to one's friends and relations retained an air of gentility and exclusivity that appealed to the rising middle classes. This mode of refined social entertainment entailed distinct refreshments, equipment, and rituals and would foster the emergence of a distinctive form of dress.

Specialization was also perceptible in interior spaces and manners, and gave rise to the development of the

dining room and parlor. Both have significance in the tea gown's rise in popularity. The emergence of the dining room and the refinement of table etiquette in the mid-nineteenth century led to increased cost and formality when hosting dinners to repay social obligations and entertain friends. In comparison, teatime was far less costly and formal and could host a greater number of individuals, as custom required that guests stay between fifteen minutes and half an hour. With increased urbanization, social circles expanded rapidly and teatime became a more accommodating and feasible event in a system of reciprocity that was often daunting, and where hosting anxieties were on the rise. The parlor was in nature more flexible and became a stage for public display where teatime was held. As socializing was frequently conducted in private residences, home was also a public stage, and many late nineteenth-century parlors aimed to convey to visitors the owners' artistic sensibilities. This contributed to the popularity of the tea gown, which was considered to be the appropriate form of dress for artistic and exotic features. Many such gowns were aesthetically coordinated with their surroundings. This also influenced artist James Abbott McNeil Whistler and architect Henry van de Velde to design tea gowns for sitters or clients.

As teatime had long been conducted in private residences, the type of gown worn for the occasion was derived from interior gowns, which fit into the category of "undress." Nineteenth-century dress code was mainly divided in three categories: "undress," "half dress," and "full dress." Although this classification suggests a crescendo from least to most formal, elevated levels of formality existed within each category. As both men and women participated in social tea-drinking, and because teatime could be attended by distant acquaintances, tea gowns worn by hostesses did not stray far from Victorian propriety and became very formal interior gowns that were fit for public exposure. The state of "undress" could thus include gowns that were loose or semi-fitted to those, like the tea gown, that could be as fitted as other day and evening dresses. However, artistic elements such as Watteau pleats (wide pleats emerging from the center back neckline borrowed from eighteenth-century gowns) and draped front panels were among the features often added to a fitted understructure that gave the impression of looseness. These elements gave way to very elaborate interior gowns that were not labeled as "tea gowns" until the late 1870s.

The earliest labeled tea gowns discovered to date appeared in the 1878 British periodical, *The Queen, The Lady's Newspaper*. These one-piece gowns with long sleeves, high necklines, and back trains were made to give the impression of being closely fitted open robes with under dresses. One had the Watteau pleats and was named "The Louis XV Tea Gown." This is of interest as it names its source of inspiration and reinforces the eighteenth-century salon connection that was mentioned by writers

of the period, and helped to intellectualize and elevate the status of teatime. Such tea gowns co-exist with numerous other elaborate interior gowns of the same style, which, until the turn of the century, were as likely to be named with the new term “tea gown” as they were to be labeled by the variant French term, *robe de chambre*. The words *robe* and *toilette* were also used interchangeably, as were *chambre* and *intérieur*. Terminology is thus a problem because tea gowns were derived from interior gowns, but not all interior gowns were fit to be worn in mixed company at teatime.

Nineteenth-century tea gowns seen in fashion plates followed the bustled styles of their times, and descriptions mentioned elaborate fashion fabrics and trims. This serves to differentiate these gowns further from other interior gowns. Although loose and artistic features were acceptable in tea gowns, their public use mandated the adoption of the fashionable and highly-fitted silhouette.

As wearing underpinnings such as bustles without a corset was not a Victorian practice, the contrived fashionable silhouette present in tea gowns observed in fashion plates and in surviving specimens in museum collections suggests that corsets were worn under some of these gowns.

From the late 1870s to the mid-1910s, tea gowns were immensely popular. Their magnificence was on the rise and leading designers joined in with fanciful creations that could easily have been mistaken for fancy dresses.

As Edwardian dress gave rise to a love of different colors and fabrics and introduced Empire revival features in high fashion, a progressive blurring occurred. The appropriateness of historically inspired gowns with looser and exotic elements was no longer confined to teatime. This also expanded the tea gown’s use to other day and evening events. As the revivalist Empire silhouette gained ground and exoticism became the rage, it became hard to differentiate tea gowns from other types of gowns. Changes also occurred in the physical settings of teatime, which migrated to newly-popular tea pavilions and helped the *thés dansants* of the 1910s supersede teatime in the home as the fashionable thing to do.

See also **Empire Style; Europe and America: History of Dress (400–1900 C.E.); Robe**.

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Anne Bissonnette

TECHNO-TEXTILES Techno-textiles are fabrics that incorporate new technologies and new functionality into a traditional textile material. Sometimes called “tech-textiles” or “technical fabrics,” most techno-textiles have their roots in industrial or military applications. Techno-textiles are employed in many different applications, ranging across biomedical devices, aircraft, automobiles, electronics, and more, including clothing and home furnishing.

Textiles are products basically constructed of fibers. These fibers are frequently twisted together (thousands at a time) to create yarns, and the yarns can be woven, knitted, or braided to make fabrics. When looking at a fabric, it is easy to forget that fabric is really made of thousands or millions of small fibers. However, the fibers are the most important component of the textile. The choice of fibers and yarns can change the behavior of the textile material. Most techno-textiles are developed at the fiber level. By modifying materials thinner than a human hair, the performance of a fabric can change dramatically.

Since the dawn of synthetic plastics, techno-textiles have been marketed. One of the earliest examples of fibers made for high-tech application is nylon. As the air force was developing as a significant component of the armed forces, parachutes became more and more important. Parachutes were made from woven silk fabric. Researchers were interested in developing a synthetic substitute for silk to control quality, source, and improve strength. Nylon was an ideal source and rapidly developed to satisfy this market.

Recognizing nylon as a silk substitute, however, quickly led people to consider other products made from silk as candidates for nylon. Stockings, which were extremely popular and rather expensive at the time, were identified as a likely market. The success was so great that the public started calling stockings “nylons” within a few years. The increased strength and durability of the nylon compared to silk made this a tremendous success.

By the early 2000s, nylon was no longer considered a techno-textile, but rather a commodity fiber. This continues to happen: as new technologies become commonplace and accepted, they cease to be considered high-tech. What at first seem like fantastic applications will likely, within years or decades, become commonplace.

Comfort through Technology

One of the most popular applications of techno-textiles is to provide comfort in a garment. Generally speaking, there are two aspects of comfort that clothing can address: perspiration and temperature. A comfortable garment will take moisture away from the body and maintain a good temperature level.

Moisture control. Expanded polytetrafluoroethylene (ePTFE) has transitioned from the laboratory to apparel. PTFE is the same chemical structure as Teflon, but when

it is expanded, some unique properties can be realized. Gore popularized this technology as the Gore-Tex membrane. The basic idea is that the membrane has very small holes in it. These holes permit water vapor to pass, but are too small to allow a water droplet through. Thus, if a person wearing this garment is perspiring, the water vapor can move through the membrane. However, if it is raining, the droplets cannot pass through to make the person wet.

Temperature control. Phase change materials are becoming quite popular as a way to control temperature in a garment. Basically, microencapsulated waxes are embedded into the fabric. When the wax melts, it absorbs thermal energy, effectively cooling the material when it is heated. Conversely, when the molten wax solidifies, it releases heat while the overall system is cooling. The result of this is a material that tries to maintain a certain temperature, effectively taking the peaks of heat and cold away.

There are methods to actively change the temperature of clothing as well. Astronauts, aircraft test pilots, and racecar drivers have been using refrigerated clothing for some time. Tubes of coolant are embedded in the clothing and a small pump pushes the cool liquid throughout the garment. Thermal-electrical devices are also being considered.

E-Textiles

Some of the more exciting possibilities for techno-textiles come from using modern electronics and computer technologies in clothing. The key elements are the use of electrically conductive fibers or yarns so that signals can be sent throughout the garment, flexible power sources, flexible computer equipment, and flexible display systems.

Conductive materials in fibrous form, such as metals or carbon, or even conductive polymers such as polyaniline, can be used as wiring within a piece of fabric. These wires can carry electricity to various components, such as sensors, actuators, or computer chips, that are embedded in the garment. Wireless communication devices can communicate information to and from the clothing.

For example, Infineon Technologies, AG, is developing a method to incorporate motion detection devices into carpeting. This can be used for a variety of purposes, including controlling lighting to turn on when someone enters the room, or to detect intruders. In addition to detecting motion, the chip can measure temperature, which could lead to applications such as automatic floor lighting in the event of a fire, showing the occupants a path to safety.

The motion detection module is woven into the carpet backing. Red wires supply voltage, green wires carry data, and blue wires are ground for Infineon's demonstrator smart carpet motion-detection module. A capacitive sensor in the module detects when a green wire is touched, which lights the red LED.

Optical fibers can be incorporated into fabric structures in such a way as to create light patterns on the surface of the fabric. By proper control, the fabric can effectively become a television or computer screen. France Télécom demonstrated such a technology—a fabric display screen. Eventually this technology could be incorporated into everyday clothing or home furnishings. Imagine a simple, businesslike shirt that can be converted into a dynamic flashing nightclub outfit with the flip of a switch. Draperies and wallpaper could become display units so that the pattern or color scheme can be changed to the owner's instantaneous desire.

Maggie Orth has developed Electric Plaid for this purpose. Electric Plaid doesn't work by controlling fiber optics, but rather by controlling temperature-sensitive dyes—another techno-textile application. Temperature-sensitive dyes can change color depending on how cold or hot the fabric becomes. Electric Plaid has heating and cooling filaments embedded in the fabric. By changing the degree of heating and cooling at different places in the fabric, Orth has created a fabric that changes color and pattern slowly throughout the day.

Embedded sensors. Sensors to determine such disparate phenomenon as temperature or oxygen content can be created in a fibrous form. Typically these are fiber optics that have Bragg diffraction gratings that can measure small changes in the environment. Because they are produced as fiber optics, they can be incorporated into clothing. A number of companies, such as Big Light and SensaTex, have embedded these sensors into underwear so that the fibers are touching or close to the human body.

The information received by these sensors can be transmitted to another location. Some of the life-critical applications for these include infant garments to provide early warning against SIDS (Sudden Infant Death Syndrome), and for soldiers. In either case, information can be sent back to the parents or commander to provide details about the health and well being of the wearer. Should a problem arise, quick response can prevent serious difficulties. If the infant's breathing becomes irregular, the control system will notify the parent who will rush to assistance. If the soldier is wounded, the change in body temperature and heart rate will create a warning for the medics to come to his aid. Not only will the medics know there is a problem, but also a location system on the soldier will allow the medic to find the soldier quickly.

This kind of technology is also being transmitted to the world of sports. One of the obvious applications is for training purposes. Both the athlete and the trainer can observe changes in vital signs and determine the degree and efficiency of the workout. At Tampere University of Technology (Finland), researchers have made a snowmobile suit that includes a location sensor and transmitter as well as accelerometers to detect crashes. If a crash should occur, the suit will send a distress call that includes the location of the athlete as well as vital signs.

Sources of power. As exciting new applications of electronics in textiles develop, there is a need to provide electrical power to these devices. There are several interesting approaches in development that will see future applications.

A few companies have produced very thin and flexible batteries that are about as intrusive as a label. Although these don't provide very much power, they can be sufficient to handle electrochromic devices or even small fiber optics.

There are some interesting variations being developed other than batteries. One is a generator that is attached to shoes. A generator creates electrical energy by spinning a magnet through a coil of wire. This is the opposite of making a magnet by wrapping a wire around a nail and running electricity through the wire. The basic idea is to make the heel of the shoe able to move up and down so that with each step the wearer pushes the heel up, which moves magnets through a coil and electricity is generated. Then the shoe is simply connected to the garment to provide electricity. There are a few problems with this idea, such as the wires required to connect the shoe to the clothes, and the fact that the heel of the shoe might be larger than normal.

Electricity can also be converted from thermal energy through a process known as the Seebeck effect. In the Seebeck effect, two different conducting materials are joined, and when the temperature between them is different, an electric current is produced. This can be great for cold weather environments, where one conductor is on the outside of a coat, so it is cold, and the other conductor is on the inside by the wearer where it is warm. This difference in temperature can create electricity that can be used for various things, such as charging a cell phone or MP3 player, or finding one's coordinates through a global positioning system.

The opposite of the Seebeck effect is the Peltier effect, wherein electricity can be used to create temperature, but not like a heater, rather like a cooler. By proper choice of the conducting materials, the Peltier device can become cooler than the environment, allowing a flexible cooling system. Such devices can be embedded in fabrics.

Various companies have developed flexible solar cells. Solar cells convert light into electricity. The recent possibility to make them flexible allows them to be used in clothing and accessories. Recently a student of the author of this article, Lauren Sabia, developed a shoulder bag that incorporates flexible solar cells in the strap and has conducting wires that run to a cell phone holder allowing the solar cells to charge a cell phone when not in use.

The Future

It is not known what the future holds for high-tech textiles. There may exist far-out concepts such as a tie made from fibers that are semiconductors allowing the garment to double as a memory storage device for a computer.

Perhaps yarns will be developed that have muscle-like behavior that allows them to contract, making the sleeves of a shirt give the wearer extra strength or speed. What is known, though, is that most technological advances eventually make their way into textile products because just about everybody wears clothing.

See also **Future of Fashion; High-Tech Fashion.**

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Christopher M. Pastore

TEENAGE FASHION Since World War II, clothing styles adopted by young people have been a powerful influence on the development of fashion in North America and Europe. The postwar growth of young people's spending power ensured that the youth market became a crucial sector of the fashion business. The styles adopted by young people, moreover, also became an important influence on wider fashion trends. Indeed, by the 1990s the "youth" market had expanded to embrace not only teenagers, but also consumers in their twenties, thirties, and older.

"B'hoys" and "Scuttlers"

Distinctive fashions for young people were not unique to the twentieth century. During the Victorian era a gradual increase in young workers' leisure time and disposable income laid the basis for an embryonic youth market, with cities in America and Europe seeing the development of mass-produced goods, entertainments, and fashions targeted at the young.

Young people also used fashion to mark out individual and collective identities. During the 1890s, for example, many working girls in urban America rejected conservative modes of feminine dress in favor of gaudy colors, fancy accessories, and skirts and dresses cut to accentuate their hips and thighs. Young working men also adopted distinctive styles. In the mid-nineteenth century, for instance, the Bowery area of New York City was home to dandified street toughs known as "B'hoys." According to the socialite Abraham Dayton, "These 'B'hoys' ... were the most consummate dandies of the day," and paraded the streets with lavishly greased front locks, broad-brimmed hats, turned-down shirt collars, black frock-coats with skirts below the knee, embroidered shirts, and "a profusion of jewelry as varied and costly as the b'hoy could procure" (Dayton, pp. 217–218).

Comparable fashions also appeared in Europe. For instance, in his autobiographical account of life in the British town of Salford, Robert Roberts recalled the gangs of young toughs known as “scuttlers” who, at the turn of the century, sported a trademark style of “union shirt, bell-bottomed trousers, heavy leather belt picked out in fancy designs with a large steel buckle, and thick, iron-shod clogs” (Roberts, p. 155).

Flappers and Campus Culture

The 1920s and 1930s saw the youth market expand further. In Britain, despite a general economic downturn, young workers’ disposable incomes gradually rose, and they were courted by a growing range of consumer industries. In the United States, the economic boom of the 1920s also ensured a budding youth market, while distinctive styles became increasingly associated with the young. The image of the young, female “flapper” was especially prominent. With her sleek fashions, short bobbed hair, and energetic leisure pursuits, the archetypal flapper featured in many advertising campaigns as the embodiment of chic modernity.

Clothing styles geared to young men also became more distinctive. From the 1890s sportswear became popular for casual attire. Shirt styles previously worn for sports replaced more formal garb as a new, leisure-oriented aesthetic surfaced within young men’s fashion. Indicative was the appearance of the “Arrow Man,” who became a fixture of advertisements for Arrow shirts from 1905 onward. A model of well-groomed and chisel-jawed masculinity, the “Arrow Man” was a youthful and stylish masculine archetype whose virile muscularity guaranteed a fashionability untainted by suspicions of effeminacy. With the expansion of American colleges and universities during the 1920s, an identifiable “collegiate” or “Ivy League” style of dress also took shape. Clothing firms such as Campus Leisure-wear (founded in 1922), together with the movie, magazine, and advertising industries, gave coherence to this smart-but-casual combination of button-down shirts, chino slacks, letter sweaters, cardigans, and loafers.

Bobby Soxers and Teenagers

During the 1940s the economic pressures of wartime drew significant numbers of young people into the American workforce. As a consequence, youth enjoyed a greater measure of disposable income, with U.S. youngsters wielding a spending power of around \$750 million by 1944. This economic muscle prompted a further expansion of the consumer industries geared to youth. Young women emerged as a particularly important market, and during the 1940s the epithet “bobby-soxer” was coined to denote adolescent girls who sported a new style of sweaters, full skirts, and saddle shoes, and who jitterbugged to the sounds of big-band swing or swooned over show-business stars such as Mickey Rooney and Frank Sinatra.

The “teenager” was also a creation of the 1940s. Since the 1600s it had been common to refer to an ado-

lescent as being someone in their “teens,” yet it was only during the 1940s that the term “teenager” entered the popular vocabulary. The U.S. advertising and marketing industries were crucial in popularizing the concept. American marketers used the term “teenager” to denote what they saw as a new market of affluent, young consumers associated with leisure-oriented lifestyles. Eugene Gilbert made a particularly notable contribution. Gilbert launched his career as a specialist in youth marketing in 1945, and by 1947 his market research firm, Youth Marketing Co., was flourishing. Gilbert was acknowledged as an authority on the teenage market, and during the 1950s his book, *Advertising and Marketing to Young People* (1957), became a manual for teen merchandising.

The success of *Seventeen* magazine also testified to the growth of the American “teen” market. Conceived as a magazine for college girls, *Seventeen* was launched in 1944. By 1949 its monthly circulation had reached two and a half million, the magazine’s features and advertising helping to disseminate “teenage” tastes throughout America.

The Teenage Market Explodes

During the 1950s the scope and scale of the U.S. youth market grew further. This was partly a consequence of demographic trends. A wartime increase in births and a postwar “baby boom” saw the American teen population grow from 10 million to 15 million during the 1950s, eventually hitting a peak of 20 million by 1970. A postwar expansion of education, meanwhile, further accentuated notions of youth as a distinct social group, with the proportion of American teenagers attending high school rising from 60 percent in the 1930s, to virtually 100 percent during the 1960s. The vital stimulus behind the growth of the youth market, however, was economic. Peacetime saw a decline in full-time youth employment, but a rise in youth spending was sustained by a combination of part-time work and parental allowances, some estimates suggesting that teenage Americans’ average weekly income rose from just over \$2 in 1944 to around \$10 by 1958 (Macdonald, p. 60).

During the 1950s, teen spending was concentrated in America’s affluent, white suburbs. In contrast, embedded racism and economic inequality ensured that African American and working-class youngsters were relatively marginal to the commercial youth market. Nevertheless, African American, Mexican American, and working-class youths generated their own styles that were a crucial influence on the wider universe of youth culture. During the 1930s, for example, young African Americans developed the zoot suit style of broad, draped jackets and pegged trousers that gradually filtered into mainstream fashion. During the 1950s, meanwhile, African American rhythm and blues records began to pick up a young, white audience. Reconfigured as “rock ’n’ roll” by major record companies, the music was pitched to a

mainstream market and became the soundtrack to 1950s youth culture.

The 1950s also saw work wear incorporated within youth style. Denim jeans, especially, became a stock item of teen fashion. During the 1860s Levi Strauss had patented the idea of putting rivets on the stress points of workmen's waist-high overalls commonly known as "jeans." By the 1940s jeans were considered leisure wear, but during the 1950s their specific association with youth culture was cemented after they were worn by young film stars such as James Dean and Marlon Brando, and by pop stars such as Elvis Presley. Levi Strauss remained a leading jeans manufacturer, but firms such as Lee Cooper and Wrangler also became famous for their own distinctive styles.

Global Circulation of Teenage Fashion

The growth of the mass media was a crucial factor in the dissemination of teenage fashion. The proliferation of teen magazines, films, and TV music shows such as *American Bandstand* (syndicated on the ABC network from 1957), ensured that shifts in teen styles spread quickly throughout the United States. The global circulation of U.S. media also allowed the fashions of teenage America to spread worldwide. In Britain, for example, the zoot suit was adopted by London youths during the 1940s, the style subsequently evolving into the long, "draped" jackets that were the badge of 1950s toughs known as "Teddy boys." Behind the "iron curtain," too, youngsters were influenced by American fashion. In the Soviet Union, for example, the 1950s saw a style known as "*stil*" develop as a Russian interpretation of American teenage fashion.

As in the U.S., demographic shifts underpinned the growth of the European teen market. In Britain, for example, a postwar baby boom saw the number of people aged under twenty grow from three million in 1951 to over four million by 1966. An expansion of education also reinforced notions of young people as a discreet social group. As in America, economic trends were also vital. In Britain, for instance, buoyant levels of youth employment enhanced youth's disposable income, and market researchers such as Mark Abrams identified the rise of "distinctive teenage spending for distinctive teenage ends in a distinctive teenage world" (Abrams, p. 10). The teen market that emerged in postwar Britain, however, was more working-class in character than its American equivalent. In Britain increases in youth spending were concentrated among young workers, and Abrams estimated that "not far short of 90 percent of all teenage spending" was "conditioned by working class taste and values" (Abrams, p. 13).

European youth style fed back into the development of U.S. youth culture. During the mid-1960s, for example, America was captivated by a British pop music "invasion" spearheaded by the Beatles and the Rolling Stones. American women's fashion, meanwhile, was

transformed by British exports such as the miniskirt and Mary Quant's chic modernist designs. British menswear was also influential. Surveying the fashion scene in "Swinging London," for example, *Time* magazine was impressed by "the new, way-out fashion in young men's clothes" (*Time*, 15 April 1966). In autumn 1966 a flurry of media excitement also surrounded the arrival in America of British "Mod" style—a fusion of fitted shirts, sharply cut jackets, and tapered trousers, which was itself inspired by the smoothly tailored lines of Italian fashion.

Counterculture, Race, and Teenage Style

The counterculture of the late 1960s and early 1970s had a major impact on international youth style. A loose coalition of young bohemians, students, and political radicals, the counterculture shared an interest in self-exploration, creativity, and alternative lifestyles. The counterculture's spiritual home was the Haight-Ashbury neighborhood of San Francisco, but films, magazines, and television, together with the success of rock bands such as Jefferson Airplane and the Grateful Dead, disseminated countercultural styles throughout the world. The nonconformity and exoticism of the counterculture leaked into mainstream youth style, and hip boutiques abounded with countercultural influences in the form of ethnic designs, psychedelic patterns, faded denim, and tie-dye.

The 1960s and 1970s also saw African American youngsters become a more prominent consumer group. A combination of civil rights activism and greater employment opportunities improved living standards for many African Americans and, as a consequence, black teenagers gradually emerged as a significant market. This was reflected in the soul music boom of the 1960s and the success of record labels such as Berry Gordy's Tamala-Motown empire. Soul also picked up a significant white audience, and the influence of African-American style on the wider universe of youth culture continued throughout the 1970s—first with the funk sounds pioneered by James Brown and George Clinton, and then with the eruption of the vibrant disco scene.

The late 1970s also saw the emergence of rap music and hip-hop culture (which combined graffiti, dance, and fashion). Hip-hop first took shape in New York's South Bronx, where performers such as Afrika Bambaataa and Grandmaster Flash combined pulsating soundscapes with deft wordplay. Hip-hop style was characterized by a passion for brand-name sportswear—trainers, tracksuits, and accessories produced by firms such as Adidas, Reebok, and Nike. Rap trio Run-DMC even paid homage to their favorite sports brand in their anthem "My Adidas." During the 1990s rap impresarios even launched their own hip-hop fashion labels. For example, in 1992 Russell Simmons (head of the Def Jam corporation) launched the Phat Farm sportswear range, while in 1998 Sean "Puffy" Combs (head of Bad Boy Records) launched the Sean John clothing line.

The 1990s and Beyond

During the 1980s and 1990s, a rise in youth unemployment, coupled with the declining size of the Western youth population, threatened to undermine the growth of teen spending. By the beginning of the twenty-first century, however, demographic shifts and economic trends indicated that youth would continue to be a lucrative commercial market. Despite a long-term decline in Western birth rates, the youth population was set to increase during the new millennium as the “echo” of the “baby boom” worked its way through the demographic profiles of America and Europe. On both sides of the Atlantic, moreover, market research indicated that teenagers’ spending power was still growing.

Teenage fashions also increasingly appealed to other age groups. For example, manufacturers, retailers, and advertisers increasingly targeted teenage fashions at pre-teens (especially girls), who were encouraged to buy products ostensibly geared to older consumers. Teenage fashions also crept up the age scale. By the end of the 1990s, many consumers aged from their twenties to their forties and above were favoring tastes and lifestyles associated with youth culture. “Teenage fashion” therefore, was no longer the preserve of teenagers, but had won a much broader cultural appeal.

See also **Street Style; Subcultures.**

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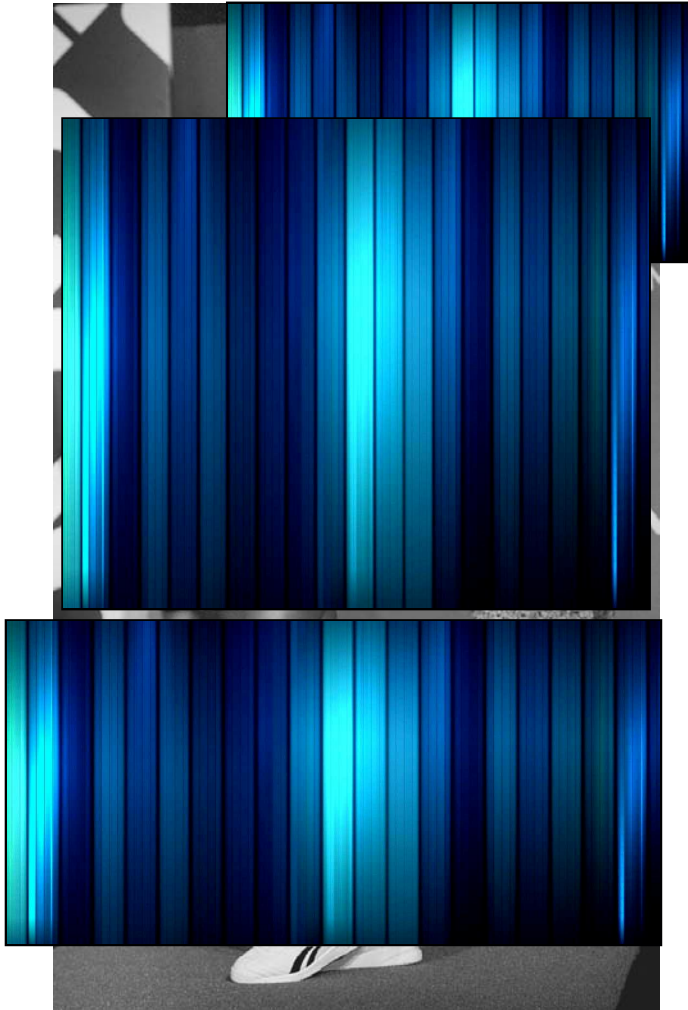
Bill Osgerby

TENCEL. See **Rayon.**

TENNIS COSTUMES The game of tennis or *Jeu de Paume* originated in France in the thirteenth century. It was played on an indoor court and became known as Real Tennis in Britain, Court Tennis in the United States, and Royal Tennis in Australia. No special clothes were worn by the nobility who played this game, although King Henry VIII, who was a keen player, preferred playing in a linen shirt and breeches. By the seventeenth century, a player is mentioned “cloathed all in white” (Cunnington and Mansfield, p. 86), the first reference to what was to become the standard color for the newer game of long, open, or lawn tennis, which was played outside.



Bunny Austin with J. Asboth at Wimbledon. During the 1930s, male tennis players faced a debate over whether it was appropriate for them to wear tennis shorts. Male players have seldom faced the controversy over attire that has at times embroiled their female counterparts. HULTON ARCHIVE/GETTY IMAGES. REPRODUCED BY PERMISSION.



Venus Williams. Sporting an outfit designed by Diane von Furstenburg, Venus Williams is not the first to wear designer attire on the tennis court. In 1949, Gussy Moran created controversy with an outfit she wore by designer Teddy Tinling. AP/WIDE WORLD PHOTOS. REPRODUCED BY PERMISSION.

Lawn Tennis

There was a lull in the popularity of the game in the eighteenth century, but by the 1860s, lawn tennis was firmly established as a favorite sporting activity, particularly in Britain. In 1877, the All England Croquet and Lawn Tennis Club (AECLTC), the ruling body for the Wimbledon Championships, established the first Championship match, a Gentleman's Singles Event. There were no formal dress codes. Instead, the AECLTC relied on the unwritten rules of middle-class decorum. Men traditionally wore white flannels with long-sleeved white cotton shirts. However, for women, the fashions of the time made it difficult to find a practical alternative to the restrictive clothes of the period. "Lawn tennis shoes, black with India rubber soles" (Cunnington and Mansfield, p. 88) were helpful, but long narrow skirts with trains,

even those that could be tied back, hindered women from fully participating in the sport in an athletic way.

Shorts and Skirts

By the beginning of the twentieth century, women were still playing in corsets with shirts buttoned to the neck and long ankle-length skirts. The arrival at Wimbledon in 1919 of Suzanne Lenglen from France changed forever the way women dressed on the tennis court. Lenglen wore a short-sleeved, calf-length, loose white cotton frock with white stockings and a floppy linen hat that she later replaced with her trademark bandeau. This style of dress, often made from white cotton pique but occasionally silk, influenced not just serious tennis players but was copied by young girls across the United Kingdom. However, as day-dress lengths grew longer in the 1930s, the divided skirt and then shorts became the norm for female players across the Western world taking the lead from American players. Men were also wearing shorts and short-sleeved shirts in the United States and France by the 1930s. Champion French player Rene Lacoste designed the first "polo" shirt in 1925 with his signature "crocodile" emblem chosen for his tenacity of play. Within a year, similar versions were available in London, made by Izod's of London's West End, who claimed they developed from golf shirts. British men were reluctant to wear shorts for competition tennis until after 1945. "Bunny" Austin was the only man to wear shorts on Wimbledon's Center Court in the 1930s. Although white was always the favored color, there were no regulations at Wimbledon about color until a 1948 restriction to discourage the increased use of colored trimmings on women's outfits. By 1963, the only items allowed to be not purely white at Wimbledon were a cardigan, pullover, or headwear. With the advent of sports manufacturers' sponsorship deals with top players, in 1995, Wimbledon restricted logos so that outfits were "almost entirely white" (Little, p. 305). Even away from Wimbledon, white remains the favored color.

Naughty Knickers

In 1949, American Gussy Moran caused an uproar by wearing visibly lace-trimmed panties at Wimbledon under her short white tennis skirt. They had been designed for "Gorgeous" Gussy by British ex-tennis player turned designer Teddy Tinling for \$17 from an experimental rayon fabric. Tinling remained the key name in women's tennis-wear design for the next twenty years, styling dresses for most of the famous female names in tennis. Throughout the 1950s and 1960s, frilly panties were popular for female tennis players. But Moran was not the first to flash her panties on court:

Dainty garments trimmed with lace do not look quite appropriate for a strenuous game, and in these days when the game is played really hard, lady's undergarments often do not leave much to the imagination, therefore knickers made of silk stockingette seem to be quite the thing. (*Woman's Life*, 31 July 1924, p. 12)

Male modesty ruled on court in the 1930s, as evidenced in this quote from *New Health*:

Try even to wear "shorts" for tennis ... and every "right-minded" male on the courts will react with a resentful leer. The implication is that they would look like a lot of funny little boys. Yet ... no one feels like jeering when eleven hefty footballers run on to the field in "shorts." (*New Health*, May 1930)

British player and former Wimbledon champion Fred Perry developed a leading line of men's sportswear from the 1950s, focusing on the traditional tailored shorts and short-sleeved shirts for men. New fabric technologies, in particular breathable fabrics, have slowly revolutionized sportswear in general. One of the oldest, Aertex, was developed in the late nineteenth century by two British doctors, mainly for underwear. From the 1920s, it was being used to make men's tennis shirts. By the 1960s, synthetic fibers such as quick-drying polyester were replacing cotton. In the 1970s, the fashion of long hair for men meant that many copied their idol Bjorn Borg's signature headband, reminiscent of Suzanne Lenglen's bandeau. The 1980s was a decade of traditional styling for both men and women, with close-fitting short shorts being worn by men and wraparound skirts popular for female players. An exception was U.S. player Anne White who, in 1985, caused a sensation at Wimbledon by wearing a white catsuit. It was not a fashion that caught on. By the 1990s, men's tennis shorts became longer and looser, and shirts baggier. For women, however, the introduction of Lycra into tennis wear drew the focus away from their playing skills. Players with sponsorship deals, such as Serena Williams with sportswear firm Puma and Anna Kournikova with Adidas, promoted a body-clinging style light-years away from the corseted players of a hundred years before.

See also **Uniforms, Sports.**

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Catherine Horwood

TERRYCLOTH. See **Weave, Slack Tension.**

TEXTILES, AFRICAN For more than a thousand years, West Africa has been one of the world's great textile-producing regions. The yarn available locally for spinning was cotton, which grew in at least two colors, white and pale brown. In some places a wild silk was also spun, while raffia and bast fibers were available in addition, as were imported textiles and fibers from trans-Saharan and coastal trade networks, the latter from the late fifteenth century onward. Only in the inland Niger delta region of Mali were the wool fibers of local sheep of sufficient length to permit spinning, whereas north of the Sahara wool was the major source of spun yarn. Fragments of bast-fiber textile were recovered from the ninth-century site of Igbo-Ukwu in Nigeria, and cotton and woolen cloth from eleventh-century deposits in Mali, suggest traditions already well established. (Earlier archaeological textiles from Egypt and the Maghreb are beyond the scope of this essay.) Elsewhere in the sub-Saharan region, in the forests of central Africa, raffia was the only available fiber, and in the savannas of east and southern Africa cotton was spun, at least as far south as Great Zimbabwe.

Throughout West Africa the most widely used dye was a locally produced indigo, also exported for use north of the Sahara, though in both regions other colors were available from vegetable and mineral sources. These dyestuffs might be used on the yarns prior to weaving, sometimes tie-dyed to form simple ikat-like patterns, and they were used in the coloring and patterning of woven cloth. In some areas woven textiles and tailored garments were embroidered, especially in the region from Lake Chad westward to the inland Niger delta of Mali. There was also some occurrence of patchwork, appliqué, and quilting; and one tradition of handprinted cloth. Handprinted cloth was also found in Zanzibar, brought from India. In the raffia-weaving region of central Africa, cut-pile embroidery was well developed together with appliqué and patchwork. In eastern and southern Africa, local textile traditions seem to have depended on the weaving process for patterning. From the late nineteenth century onward, local textile industries in sub-Saharan Africa have had to compete with factory-printed cotton cloth, sometimes successfully, though in eastern and southern Africa the local production of woven cloth was supplanted in the early twentieth century. The felting of vegetable fibers to produce bark cloth (strictly speaking not a textile) has survived in Ghana and Uganda, though it was at one time more widespread.

The mechanical basis for the interlacing of warps and wefts throughout pre-industrial handloom production in Africa takes one of two forms. The most widespread system consists in leashing one set of warps to a single heddle-rod, which is manipulated with the aid of a shed stick. This is the basis of the upright fixed heddle loom used by Berber women in north Africa for weaving the fabrics used in their clothing, and of the loom laid out on the ground through the Sahara and in northern Sudan for weaving tent cloth. In Nigeria and Cameroon, women used an upright version of it, manipulating both heddle and shed stick to weave cotton and other yarns. Except in the southern Igbo town of Akwete, however, it has recently largely given way to the double-heddle loom, yet to be described. In the Cross River region in southeast Nigeria, as throughout the central African forests, male weavers used a more-or-less upright single-heddle loom to weave raffia. In parts of northeast Nigeria, and seemingly across the savannas to east Africa and south to Zimbabwe, a horizontal version of this loom type, raised off the ground but with a fixed heddle, was used in weaving cotton textiles.

Throughout West Africa, from Senegal to Chad and from the sahel to the coastal region, the more commonplace loom type has both sets of warps leashed, each to one or other of a pair of heddles linked by means of a pulley suspended above the loom and with pedals worked by the feet below. The advantage is, of course, that both hands and feet are employed, enabling cloth to be woven with greater speed and efficiency than is possible using single-heddle equipment. This loom type is also used in Ethiopia and by Arab weavers in North Africa. However, in West Africa the loom itself, with which this double-heddle system is used, has two features particular to the region: the first is the dragstone with which the warp elements are held taut. The second is the narrowness of the web; for it continues to be both normal and commonplace for cloth to be woven in a long, narrow strip often no more than about 4 inches (10 cms) wide, although in some traditions the web may be broader, perhaps up to about 12 to 14 inches (30–35 cms) and cloth as narrow as a .5 inches (1.5 cms) is known. Once the desired length is complete, it will be cut into pieces and sewn together edge-to-edge. It is only then that any visual effects intended by the weaver can be seen, manifesting a specific arithmetic in the precise counting of warps and wefts, as well as in the geometry in the layout of pattern that weavers must learn, and learn how to develop, if a given tradition is to flourish.

The patterning obtained through the process of weaving in West Africa is most commonly of three or four kinds. The first is warp striping, achieved simply by laying the warps as close as possible in the preparation of the loom and using different colors. The same pattern of stripes can be repeated across the face of the cloth, or two or more sequences of stripes can be placed in sequence, and the visual effects can sometimes dazzle the

eyes as if the colors were dancing. The second means of patterning depends upon spreading the warp elements apart as the loom is set up so that, in the woven cloth, the warps are hidden by the weft. For in allowing the weft to be seen, it becomes possible to create blocks of color that can be aligned across the cloth, or alternated to produce a chessboard-type effect, or so placed as to create a seemingly random scattering of color. A third type of woven pattern involves an additional or supplementary weft that floats across the warps. This is either floated across each face, or is woven in with the ground weft when not required for the design.

In West Africa, particular ethnic and/or regional traditions are characterized by specific ways of using these techniques. Warp stripes are still the most commonplace throughout the region, sometimes with supplementary floating weft patterns. One of the best examples of this is the Yoruba cloth known as *aso oke*, literally “top-of-the-hill cloth,” the hill identified as the location of the tradition received from one’s ancestors, and woven in the major weaving households of Nigerian cities such as Ilorin, Oyo Iseyin, and Ibadan. Yoruba weavers also weave openwork. Since the 1970s young women in Yoruba weaving households have taken up the double-heddle technology and have established themselves as independent weaving masters with great success in places where hitherto the upright loom was the sole apparatus, with the further result of inducing its obsolescence. Weft-faced patterns are especially located in Sierra Leone and in Mali, where it has sometimes been used as a picture-making process. In both countries warp-faced and weft-faced traditions flourish side by side. Only two traditions, Asante and Ewe, both in Ghana, bring all three weave structures together in one strip of fabric, thereby creating forms that are impossible to replicate exactly on a European broadloom. (It has been tried.) The narrower loom facilitates these design processes by allowing very different patterns to be placed beside each other in the one cloth. This may in the end be the justification for the continuing flourishing of these traditions. The use of supplementary warps is rare, but is beginning to be popular with some Ewe weavers. Asante and Ewe weaving is popularly known as *kente*, and while not a word with any obvious etymological significance, it may be derived from the Ewe verbs that refer to the processes of opening up the warp and beating in the weft.

Most North African weaving, whichever type of loom is used, tends to be weft-faced, and one can see this in textiles for clothing and in carpets. Tent cloths, however, are mostly warp-striped. In Somalia, locally woven cloth is generally a balanced plain weave that encourages plaid-like patterning, with stripes in both warp and weft. Weft-float patterns are a feature of some Ethiopian weaving, together with tablet-woven patterns of extraordinary complexity. In the raffia traditions of central Africa, cut-pile is the best-known means of patterning a cloth, but this is not part of the weaving process. In the cotton-

weaving traditions of east and southern Africa, the few surviving examples suggest that patterning was no more than stripes making use of the naturally different colors of local cotton.

Africa is a complex social and historical entity. There are many histories in which the traditions of a given locality have become engaged with forms and fabrics introduced from elsewhere in the formation of local modernities now taken for granted. This occurred in the Middle East, Europe, and Africa; there is more on this to follow. There are continuities of form, practice, and ideas from one place to another, especially seen in the delight in breaking up an otherwise plain surface. In principle, there is nothing specifically African about this, of course, but there are specifically African forms of its manifestation. It also happens that some of these specificities depend upon a particular inheritance of the technical means available locally for the manufacture of a piece of cloth. The delight in breaking up an otherwise plain surface manifested in hand-woven patterns, in a thousand different ways, especially in West Africa, is also seen in the techniques of resist-dyeing. In the western Yoruba city of Abeokuta founded in the 1830s, two forms of the indigo-dyed cloths known as *adire* developed with the advent of factory-woven cotton shirting. In one, raffia fiber was used to stitch or tie a pattern across the whole length and breadth of the cloth, while the other was made by pasting starch in a repeat pattern through cut-metal stencils. The raffia and the starch, each in its own way, would resist the dye to create the patterned surface. The manner in which the patterns developed was conditioned by the quality of the factory-woven fabric which was finer in texture than a textile locally woven of hand-spun cotton. Moreover, although indigo-dyed yarn was a commonplace element in weaving, locally woven cloths would normally only have been resist-dyed if they were old and worn and in need of toughening up for continued use. Then a few sticks or stones might have been stitched into the cloth, providing the original basis of the raffia-tied *adire*. The starch-pasted method almost certainly was adapted from European packaging; the zinc linings of colonial tea chests provided the original source of the metal for the stencils. In another Yoruba city, Ibadan, also founded in the 1830s, rather than use cut-metal stencils, comparable designs were painted free-hand, again using the starch. There is also now some suggestion that while the imperative to pattern, and the raffia-resist method, has its origins in local sensibilities and practices, at least some aspects of these developments were influenced by ideas and/or practices brought to Nigeria by freed slaves repatriated from Sierra Leone. In any case, much of the early imagery of the starch-resist designs can be derived from topical events in colonial history.

Long-running trade and family contacts between Lagos and Freetown may also have provided the route whereby a new set of resist-dyeing techniques arrived in

Nigeria in the late 1960s. They quickly became known as *kampala*, so named after a well-reported peace conference in that Ugandan city. *Kampala* techniques include folding and tying, and stitching, the use of melted candle wax as a resist agent, and the use of factory-made dyes. These and other techniques are indeed found in Freetown, but also in Bamako in Mali, St. Louis in Senegal, and indeed all over West Africa. Meanwhile, the popularity of *Kampala* signaled the decline of *adire* in Nigeria. There has been a limited revival, mainly through the work of textiles artist Nike Olaniyi at her art center in Oshogbo; but otherwise the resist-dyed patterning using the technology identified in Nigeria as *kampala* flourishes throughout West Africa, even as Yoruba *adire* remains at best obsolescent. Mali is also the location of the Bamana technique known as *bogolan*. This is a method of dyeing the cloth yellow, painting designs in iron-rich earth to darken the dye, and bleaching out the yellow in the unpainted areas. Originally for the magical protection of young women as they are initiated into adult status, and of hunters, this technique has evolved in recent years to provide a modern fashion fabric in Mali and widely available and imitated in Europe and the United States, and also a means of current picture making.

With so much variety in local traditions, we might ask why traders found a ready market for the cloths they brought with them; and yet we know that from the very first records of trans-Saharan trade, textiles were proceeding in both directions. The desirability of cloth, locally made and imported from elsewhere, was thus a well-established West African preference long before coastal trade with Europe, and the merchants must have known this from information available to them via North African sources. European traders from the outset of coastal trade had always included linen and woollen cloth amongst their goods. Some, in particular the Portuguese, traded local textiles from one part of the West African coast to another. They also captured slaves who were weavers and put them to work on the Cape Verde Islands making cloth with North Africa designs for the coastal trade. On the other hand, Danish merchants in the early eighteenth century were surprised to discover that Asante weavers unraveled the silk cloths they had obtained from them in order to reweave the yarn to local design specifications. Their shininess and well-saturated colors, though quite different to anything available locally, were perceived as effective within a local aesthetic. The local wild silk produced a less shiny grayish yarn, that was prestigious in some traditions but not in others. With local cotton and indigo together with other dyes, various shades of blue, yellow, green, brown, black, and a weak purplish pink were produced. A well-saturated red was not available, however; and yet red was almost everywhere a color of ritual value, though the precise content of that value was always locally specific. The color might have to do with transition from one condition of social existence to another, it could denote the volatile nature

of a deity, or have wide-ranging connotations from success in childbirth to bloodshed in war. As soon as red woolen cloth and cotton yarn were available they were in demand. Similarly in the nineteenth century, the waste from Italian magenta-dyed silk weaving was traded across the Sahara to be re-spun for local weaving.

In the late nineteenth century, silk was replaced by rayon and in due course by other artificial fibers, while ready-dyed cotton yarn assumed a substantial place in colonial trading accounts. The greater intensity and variety of color with modern dyes was one advantage, while the finer quality of machine-spun yarn was another. In a part of the world where conspicuous consumption was particularly manifested in the cloth you wore, in a context of increased demand given the democratization of systems of authority in colonial and post-colonial histories, the fact that machine-spun yarn could be woven faster than hand-spun cotton gave it an obvious advantage. The catalog of available textures was thus impressive: hand-spun cotton, machine-spun cotton, wild silk, imported silk (and its successors); and from the 1970s onward a laminated plastic fiber with a metallic core in all colors of the rainbow and more.

We can see this same design aesthetic in the bright, almost blatant, African-print fabrics now so ubiquitous throughout Africa, Europe, and the Americas. Indeed, this is a proposition that is supported by what we know of their history. In the course of the nineteenth century, Dutch textile manufacturers wanted to find a way of replicating the Indonesian wax batik process, to produce the textiles at a cheaper price, thereby undercutting Indonesian production. In due course, they developed a duplex roller system that printed hot resin on both faces of the cloth in the manner of the wax used in Indonesia (hence the term "waxprint"). The resin resisted the indigo, and once cleaned off, allowed for the hand-blocking of additional colors. However, two unintended developments in this process rendered the designs unacceptable in Indonesia: an inability to clean all the resin off, leaving spots that continued to resist the additional colors, together with the way these additional colors were not an exact fit but overlapped with adjacent parts of the design. These essentially technical problems imparted to the cloths a variegated quality that Indonesians did not like; and yet, when, by chance, Dutch merchants, probably in Elmina (the precise details remain unknown), tried these fabrics on their customers they proved to be extremely popular. Once the sights of the designers in the Netherlands were trained upon this region of West Africa, they quickly learned that the visualization of local proverbs added to the local interest in these fabrics. The earliest dated example, is located in the archive of the ABC (Arnold Brunnschweiler and Co.) factory at Hyde, Cheshire, though it was produced by the Haarlem Cotton Company, is 1895. It shows the palm of the hand with the twelve pennies of the English shilling: "the palm of the hand is sweeter than the back of the hand," the point be-

ing that as the palm holds the money so we hope to receive good fortune.

In the preindustrial technologies of Africa, printed textiles were unknown but for the two examples of *adinkra* and *kanga*. The former is an Asante cotton cloth produced at Ntonso, north of Kumasi, in which graphic signs are printed in black, using stamps made from carved calabash (gourd). Almost all of the individual patterns have an associated proverb, but this has not prevented the appearance of novel patterns based on the Mercedes-Benz logo, or making use of writing. These cloths do not convey precise messages, but evoke a tradition of knowledge about the social world. When the designs are printed on red, black, brown, or purple, *adinkra* is worn at funerals, whereas on white it has celebratory implications. In Zanzibar and related centers of East African Swahili-speaking coastal visual practice the tradition of the *kanga*, developed from a hand-block-printing tradition brought from India. A length of cloth about one by two yards was printed in a variegated pattern with a differently patterned border that became identified by the Swahili word for guinea fowl due to its speckled plumage. Once these fabrics began to be factory-printed in India and East Africa, Swahili proverbs and political slogans found their way into these cloths with the development of designs that visualized the printed words. In both East and West Africa, variegated design and the visualization of proverbs seem to have been the keys to the success of cloths now designed and printed in substantial quantities in local factories.

See also **Adinkra; Adire; Bark Cloth; Bogolan; Indigo; Kanga; Kente; Loom.**

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John Picton

TEXTILES, ANDEAN Perhaps no other society in history poured as much cultural energy into textiles as indigenous Andean civilization. Galvanized by inhospitable terrain—soaring mountain ranges, impenetrable jungles, dry deserts, and cold oceans—Andean people achieved great technological accomplishment, economic prosperity, and political cohesion without written language. Textiles developed as the primary material focus of civilization, serving to embody wealth, communicate complex ideas, and conceptualize abstractions, as well as more familiar roles of personal identity in a fashion system. For Andean societies, the textile medium paralleled uses of gold, writing, mathematics, and painted art in European history. Meaning was conveyed not just in color, pattern, and style, but also through complex processes of weaving and fabric structures. The centrality of fiber art to the Andean mind resulted in a remarkable development of skills, design, and technique unmatched anywhere.

Clothing in the Ancient Andes

Andean textile art flowered long before the sixteenth-century European invasion. Dry coastal deserts were home to third-millennium B.C.E. cotton traditions based on ingenious structural elaboration rather than color to achieve design. At the same time, mountain societies developed traditions of working colorful dyed camelid

fibers. Climate conditions leave few examples of highland wool traditions until brightly colored yarns appear on the coast during the first millennium B.C.E. The fusion of the two traditions established the character and brilliance of the Andean textile tradition that has persisted into the twenty-first-century.

Andean textile evidence comes from tombs in the coastal deserts with ideal preservation conditions. While opulent tombs may yield spectacular textiles, reconstruction of ordinary costume from grave goods demands care. Garments buried with important persons may reveal technical and design sophistication but not represent daily clothing. Less elaborate tombs, miniatures, and human images in tapestry or painted pottery show that a basic Andean costume existed by at least the first millennium B.C.E. and persisted until the arrival of Europeans two thousand years later. Constructed of short warp fabrics with little or no tailoring, the costume varied in pattern, layout, color, and structure to reflect cultural identity.

Across most of the Andean area, men wore a breechclout and a pullover shirt. The shirt extended nearly to the knee in some cultures but in others stopped at the waist, making the breechclout visible. Shirts might have a fringe at the bottom and arm openings, ornamental bindings, or other elaborate decoration that indicated social roles. A Nazca culture shirt of the late first millennium B.C.E. might be plain-woven natural-colored cotton embellished by complex wool embroidery at the neck slit, arm openings, and hem. The Middle Horizon Wari culture (500–1100 C.E.) made fine-spun alpaca tapestry shirts as symbols of rank and authority that conveyed complex patterned meanings. Men wore a mantle as an overgarment, carried a shoulder bag, and used a head-dress to express cultural identity. Headdresses included hats, turbans, and braided cords wound around the heads. Elaborate tapestry shirts of Wari men were complemented by a four-sided pile or knotted hat that expressed mythological themes.



FABULOUS TOMBS

The dry deserts of coastal Peru hold elaborate tombs filled with fabric treasures demonstrating technical and design control over the textile medium, but not necessarily reflecting daily costume. Mummy bundles from Paracas (first millennium B.C.E.) contain huge wrapping cloths, fine decorated bands, and embroideries proving a keen understanding of mathematics as well as design. Patterns on cloth found in these bundles chronicle a rich spiritual life filled with mythical beings and elaborate rituals in a highly-stratified society.

The basic women's garment in pre-Colombian societies was a square cloth wrapped around the body below the arms and pinned or stitched above the shoulders. The dress reached below the knee and may have had plain color or more elaborate patterned stripes worn horizontally. Many cultures added a patterned belt. For cultures like Nazca, large shoulder pins were part of the fashion statement. Over the dress, Andean women wore a square or rectangular shawl around the shoulders and pinned at the breast. Highly visible shawls often had complex patterning in tapestry, embroidery, or warp-faced techniques. Like men, women wore culturally specific headdresses, such as woven headbands or head cloths that fell down the shoulders and back. Hair, generally worn long and loose, or in multibraided styles, also figured in statements of fashion and identity.

The Inca Period

At the time of the sixteenth-century European invasion, the Inca Empire spanned highland and coastal Andes from present-day Colombia to Chile and united many ethnic and language groups into a single political and economic structure. Local costume from the basic Andean style of shirts and mantles, dresses and shawls, was preserved as an indicator of ethnic identity, useful in administration of the sprawling Inca enterprise. Evidence for Inca costume includes burials, figurines, and painted images found in earlier times, but also writings, line drawings, and portraits by early European visitors. Inca use of cloth may provide a good model for understanding costume and fashion in earlier Andean cultures.

Two modes of production characterized Inca textiles. *Qompi* was fine camelid cloth, mostly of tapestry, produced with state support by cloistered women or men. They worked on an unusual frame loom at least twice as wide as it was tall. The fabrics were folded in the middle to become men's shirts that were distributed by the government as uniforms or rewards for state service. Large checkerboard patterns and other repeating designs indicated social or military roles, while more elaborate registered patterns called *tokapu* may have functioned within a still obscure system of communication. *Tokapu* blocks are also found on belts used by both Inca men and women. *Awasqa*, a second mode of textile production made in the rural villages, was warp-faced cloth with complex patterns made from two oppositely colored warps in a technique known as complimentary warp weaving. Some *Awasqa* was tax payment to the state, but most local style cloth stayed within the village-specific fashion system.

People of all ranks within the Inca Empire probably wore the same essential costume of shirts, breechcloths, and mantles for men and wraparound dresses and shawls for women, with marked differences in quality to indicate class or identity. Finely spun and brightly colored cloth reserved for the Inca nobility was called silk by the Spanish because such smooth, lustrous, and fine-to-the-

touch fabric was only known in Europe from Chinese cloth. These fabrics became shirts that reached to the knee and were sometimes belted over a breechclout with a relatively plain mantle as outergarment. Inca men wore very short hair, and the upper classes used large earplugs that stretched the lobes. Men's headdress was rigidly controlled; higher classes wrapped ornate braided strands around their heads. Inca-period women's dress often had broad horizontal stripes and reached the ground, held at the waist with a highly patterned belt. The shawl pinned in front usually had more elaborate patterning in bands of complementary warp or weft weaves. Women's hair was loose or in two braids, and held by a patterned headband or covered with a cloth. Wrapped in striped and patterned cloth, Inca nobility must have made a very colorful sight indeed. People of lower status wore the same garment types, but they were constructed of coarser natural-colored yarns with less patterning laid out in village-specific formats.

The Colonial Period

The European invasion of the sixteenth century altered costume drastically, and introduced new materials such as sheep's wool and silk, as well as new ideas and forms. In less than a hundred years, Andean men adopted European breeches, hose, and felt hats. The Inca tapestry shirt became ritual costume used to claim royal descent, and specific meaning of patterns was lost. Portraits of Inca noblewomen show fuller, ground-length Inca-style dresses. Decorated belts define the waist, and highly patterned shawls cover the shoulders. Common people of the Andes continued to use much of the basic costume but added pants for men and hats in the new European technique of knitting.

Spanish Peru, a closed colony until the eighteenth century, developed a unique Creole costume from European, Islamic, and indigenous sources. In addition to the long full skirts and lace trim familiar in Europe, Spanish Creole women added the *manta*, a small hood that could cover the face in the manner of the Islamic Moors, and the *saya*, a long straight overskirt from indigenous Andean models. The *Limeña Tapada* (Covered Woman of Lima) of the seventeenth century wore long skirts to obscure the feet, while tight bodices went so far as to reveal the breasts in public.

The eighteenth-century advent of the Bourbon Kings in Spain and political ferment in Peru led to profound changes in the clothing and fashion. With the colony opened to trade, Creole costume fell into step with European fashion. Meanwhile, leaders claiming Inca royal descent revitalized indigenous costume as part of rebellion against Spanish authorities. Insurrections led to prohibition against indigenous costume and to sumptuary laws requiring Andeans to adopt a new costume derived from that of Iberian commoners. This set of clothes included vests, jackets, and knee-length breeches for men and full skirts for women. Both genders adopted a saucer-shaped hat



GLOSSARY OF TECHNICAL TERMS

Bayeta: Fabric originally manufactured in Spain that was widely used in South America in the Colonial period. Made from cotton or wool fiber, it was loosely woven from softly twisted yarns that were brushed up on the surface. In order to make the fabric more compact and dense it was subjected to a special finishing process.

Complementary warp pattern: A pattern in which an additional set of lengthwise (warp) yarns is used in the same way as the primary set of warp yarns. Emery

(The Primary Structures of Fabrics, 1980) describes such warps as “co-equal.”

Warp: Lengthwise yarns in a woven fabric.

Warp-faced: Fabric in which the lengthwise (warp) yarns predominate on the surface of the fabric.

Weft: Crosswise yarns in a woven fabric. Synonyms include filling and woof.

Weft-faced: Fabric in which the crosswise (weft) yarns predominate on the surface of the fabric.

made of felt over an armature of coiled basketry. Widespread throughout the Peruvian Andes by the beginning of the nineteenth century, these costumes were precursors of the twenty-first century's traditional Andean costume.

The Late Twentieth and Early Twenty-First Centuries

The multicultural Andes in 2004 encompasses parts of Ecuador, Peru, Bolivia, Chile, and Argentina, where nearly 30 million people speak indigenous languages. Millions more without language identity still live fundamentally Andean lives, with cultural identities reflected through widely-differing costume. Many use style flexibly, changing costume to express different aspects of the multiple identities that are their heritage.

The most elaborately-patterned handwoven Andean cloth is made in rural villages from Cuzco south through Bolivia. Each village has a distinctive costume derived from fusion of Iberian and indigenous Andean models. Many village women wear full skirts of balanced, plain-weave, woolen cloth known as *bayeta*, white cotton blouses and vests with machine embroidery, and felt or *bayeta* jackets. Village-specific felt-covered basket hats and decorated warp-faced shawls indicate identity. Some Bolivian women use a patterned straight *aksu* overskirt derived from the original Andean dress.

The distinctive costumes of women who leave village identity behind to live in major highland cities, use manufactured goods to declare participation in the money economy and class, rather than village identity. Knee-length pleated skirts with machine-made sweaters and blouses mimic but are not confused with rural costume. Women wear shoes and hose rolled at the knee, and cover their shoulders with machine-made shawls. High-crowned white straw hats are the most distinctive feature of the area-wide costume worn by women of commerce.

Highland men may own village-specific clothes for special occasions, but usually wear an area-wide costume to indicate class rather than village identity. Most costume elements are store bought, such as pants and shirts, although men use a poncho handmade by women in their lives. In the twentieth century throughout most of Peru and Bolivia, this poncho was walnut-dyed brown without pattern, but red ponchos with supplementary warp-woven patterns have more recently become popular with university-educated men. Brown ponchos are usually worn with a felt fedora, while red-poncho men prefer to go hatless with a neck scarf in very cold conditions.

The northern Andes of Ecuador has very different costumes, mostly made by specialists from machine-made cloth. Women wear dark wraparound skirts at the knee or below and cotton lace blouses topped with voluminous bead necklaces. Felt fedoras crown the head. Men wear shirts and pants of white cotton covered with a machine-made or handmade poncho that may be reversible or even have a collar but has little patterning. The belt that both sexes wrap around the waist may be the last remaining handwoven costume item.

The arrival of the money economy, tourism, and the information age has brought great change to traditional Andean costume. While some villages adhere to traditional productive patterns and costume norms, even rural people adopt conventional store-bought clothes as they enter the money economy. Many discover the warmth and convenience of down coats and other garments left by hikers and tourists. With even the most remote villages now within reach of television, many women abandon braided hairstyles of previous generations and adopt jogging suits and other casual dress. For thousands of years, technology of cloth production and use has been both a visible fashion statement and the primary mode of intellectual exploration. Recent changes challenge the

fundamental identity of Andean people, whose culture was built on cloth.

See also **America, South: History of Dress.**

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Ed Franquemont

TEXTILES, BYZANTINE Constantine the Great (r. 324–337) reunified the Roman Empire as its sole ruler in 324 and promptly began the expansion of the little harbor city of Byzantium on the Bosphorus, renaming it Constantinople. Replacing Rome as the imperial capital, the city reflected the emperor's new Christian faith in the central cathedral complex, while Hellenistic and Eastern schemes were used in the city's public areas. The Byzantine Empire's vast, all-Mediterranean territory was greatly reduced after Justinian (527–565). It was beset by many reverses and crises throughout the flowering of the Macedonian dynasty (867–1056) and suffered its most brutal shock during the Sack of Constantinople by the Crusaders in 1204. Throughout the period Constantinople exerted a cultural, a spiritual, and at times, a military authority on its western and eastern neighbors, an influence that was reestablished during the Palaiologan dynasty (1261–1453). Byzantine art and architecture survived the empire's fall in 1453 to the Ottoman Turks by continuing in the Eastern Orthodox heritage.

The Textile Context

A Spanish rabbi and traveler, Benjamin of Tudela (1127–1173), reported on a visit to Constantinople that, "All the people look like princes. The Second Rome is a glittering city of miracles. Everybody is dressed in silk, purple and gold" (Geijer, p. 129). Such awe was a frequent reaction in Western visitors when encountering the splendor of the capital; they were also hopeful to be on the receiving end for imperial favors. These might take the form of superb Byzantine textiles, exceptional gifts of prestige and diplomacy for select secular or ecclesiastical rulers. Many of these silken achievements of superior loom technology and dyeing excellence survive in the early 2000s, often reduced to tiny fragments in church treasuries and museums. Patterned and figured, monochrome or multihued, these silks were made into vestments for powerful bishops and abbots, served as wrappers or purses for relics, and were draped, as large *pallia*, over the remains of saints in shrines and tombs. Rare imperial inscribed silks are known to have been stored in the west for decades or centuries before being used as funerary textiles. Silks from the imperial workshops and city guilds also came west in the trousseaus of Byzantine princesses. Yet others were silks of lesser quality, some made in the Islamic East, and purchased by Western visitors to Constantinople.

Europeans were probably unaware that an important reason for the strict ceremony of the imperial court in Constantinople was a long-standing game of one-upmanship vis-à-vis the equally elaborate etiquette in the courts of Middle East, and, from the late seventh century, Islamic rulers. Intricate court ceremony had a long history in ideas of divine kingship. Prior to Islam's introduction, the Byzantines had established relationships of reciprocity in peacetime as well as war with the Sassanian dynasty (224–651), by sharing designs, motifs, and figures. The first Islamic rulers of the Umayyad Caliphate (661–750) attempted to match the opulence of Byzantium in the architecture and decoration of their desert palaces. The Abbasid Caliphs (763–1258), settling in Baghdad, provided further rivalry to Constantinople in conspicuous consumption; late eighth-century texts describe how Syria's merchant fleet supplied luxury items to the Byzantine court. These interdependencies explain the numerous shared features in the art and architecture of the Mediterranean cultures, as well as the staying power of certain recurring motifs. After 1453, Byzantine style survived and continued, especially in embroidered panels used in the sacred and secular life of Greece, Armenia, Bulgaria, and in the monasteries of Kievan Rus.

Silk Manufacture and Importation

The 912 *Book of Ceremonies* of Constantine VII (d. 959) sets out the elaborate, ranked dress requirements for courtiers and administrators of the empire. To meet these prodigious needs, textile production was prioritized and put under imperial control. The first generation of skilled

weavers had been brought during the sixth century from the Mediterranean or Persia, where the draw-loom pattern device had developed since the third century. This technology allowed figured motifs to be mechanically replicated. The weavers' privileged position was hereditary to begin with, but later the conditions worsened as the state attempted to maintain control of the market forces. Texts such as the *Book of the Prefect* (*Eparchikon Biblion*), in which the regulations for the city's five private guilds were codified, details the organization of textile manufacture in Constantinople. There were merchants (*metaxoprates*, raw-silk dealers; *bestioprates*, silk-cloth vendors; and *prandioprates*, Syrian silk sellers) and manufacturers (*katartarii*, silk-thread producers; and *serikarii*, weavers).

Specialized trades of dyers of purple, weavers, and tailors worked in the imperial workshops, but information about the actual operations or types of equipment can only be inferred from the few surviving examples that can be securely identified. One striking feature of the finest silk *pallia* with their large-scale designs and multiple colors is the loom width. Some were more than 6 feet (2 meters) wide, requiring extraordinary technical capability in loom construction and accomplished levels of collaboration during the weaving. Silks from production centers outside the Empire do not match these dimensions; the widest from Zandaneh, near Bukhara, measured 47 inches (120 centimeters).

The Abbasid silk fabrics, imported in significant quantities to Constantinople by Syrian traders, indicate a range in weaving quality—the Byzantine wealthy may well have been dressed in imported Syrian silks, while true *panni imperialis* were reserved for the court. A surviving group of red-ground textiles, the so-called Samson silks, shows a standing man wrestling a lion framed by undulating borders; it is proof of the merchants' ability to provide an efficient supply chain for various markets. Details in the drawing of the figure and the execution vary from one example to the next, giving a range of quality for a popular theme from fine and perfectly woven to coarse and replete with weaving errors.

Rabbi Benjamin mentioned in his eleventh-century report that 2,500 Jews worked as dyers in Byzantine Pera, and 2,000 more in Thebes on Peleponnesos, evidence of the degree and scope of specialization in the trades. The rare Tyrian, or Murex, purple dye was of ideological importance especially to the Macedonian dynasty that designated its heirs as *Porphyrogenetos* (i.e., born in the palace's purple marble room). Analyses of the dye content in the surviving corpus of Byzantine textiles reveal that a small minority contains the fabled and prohibitively expensive true shellfish purple; most are combinations of indigo-blue dye, cross-dyed with madder or kermes red. Murex purple has been confirmed in the silk yarns weaving the clothing of the Virgin Mary in the famous *Sancta Sanctorum* silks, and in certain of the imperial eagle silks.

Types of Textiles

The imperial production centers prioritized pattern-woven silks in mechanically repeated designs, produced with relative speed and ease on the draw-loom. Other types of textiles, such as plain woollens and linens, certainly coexisted with the prodigious output of the Constantinopolitan looms, but their survival rate is scant by comparison.

Silk weaves. Structurally, the great majority of the surviving patterned silks use compound twill (*samit*, *samitum*), in one or more colors. Plain weave (*tabby*) is represented; some display supplemental or compound patterning. A novel compound weave, *lampas*, appears in its fully developed version in which different weave structures are combined (such as plain weave and twill or satin), first in Baghdad, and presumably soon thereafter reaching Islamic Spain and Constantinople circa 1100.

Tapestry. Early Byzantine textiles rendered in tapestry technique with Greek inscriptions have survived in Egypt's dry sands in considerable numbers. Usually termed "Coptic," although some have been shown to be Syrian, they are made of linen and colored wool thread for making clothing components, *clavi*, and for decorative curtains and wall hangings. A later, rare and large eleventh-century example in silk, circa 2 meters square, was found in the tomb of Bishop Gunther (d. 1065); it depicts a mounted, triumphant emperor.

Embroidery. In classical texts, Greek women's needlework skills are celebrated, and establish traditions that lived on in Byzantine women's quarters, *gynacea*. Groups of fourth- to seventh-century woolen embroidered panels for clothing and interior decoration with late antique themes and Greek inscriptions have been found in excavations in Egypt. The figures in the border of Empress Theodora's mantle in the famous Ravenna mosaic, for example, are thought to be embroideries. Needlework in the Palaiologan style survives in splendid works created for Russian monasteries from the fifteenth century.

Design Motifs, Iconography

The meta-language of power and divine privilege in ancient Middle Eastern royal motifs and compositional schemes was assimilated in the cultures around the Mediterranean. Weavers in Tang Dynasty China (618–906) also adopted it for silk designs produced for trade. The animal motifs include lions, elephants, eagles, and fantasy hybrids such as the *senmurv* and griffin, often incorporating a tree-of-life, and nearly always framed by the ubiquitous decorated roundel, a long-lived style that only waned by the thirteenth century. Small floral and geometric motifs, also based on Sassanian models, include heart- and spade-shaped foliate motifs in horizontal or offset registers. During the periods of Iconoclasm (726–787, 814–843) when no figurative depictions of Christian divinities and persons were allowed, Constantinopolitan workshops favored motifs that evoked the

heritage of the late antique, depicting charioteers and hunt scenes.

See also **Textiles, Coptic**.

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Désirée Koslin

TEXTILES, CENTRAL ASIAN Central Asia consists of a great sweep of landmass running from the Pacific Ocean, off the coast of Siberia, to the plains of central Europe, with high mountain chains edged with tundra and desert. The foothills, plateaus, and valleys are often luxuriant, supporting villages and towns. In the vast deserts, rivers nurture the isolated oasis cities. The great cultural centers of Asia—India, China, and Iran—lie beyond the mountains. These cultural centers both influenced and were influenced by Central Asian tradition. At the center of this landmass are the Pamir Mountains. The Tien Shan range runs up through Tajikistan, Uzbekistan, Kyrgyzstan, and Xinjiang to circle the Tarim Basin (Tarim Pendi) and the Taklimakan Desert. Beyond, the Altai Mountains separate Mongolia from the steppes of Kazakhstan.

Two major ethnic groups populated the area during prehistoric times. The people of Indo-European descent, who had an agrarian background, moved eastward and were responsible for the oasis settlements, while the nomadic Turkic tribes, belonging to a number of Mongoloid people, moved westward from the steppes.

The fertile ravine and upland areas, running in an arc from Iran to China, have a network of autonomous kingdoms; the oasis cities of the Silk Road were linked by trade and religious beliefs. From the first century B.C.E. to the Arab conquests of the eighth century C.E. the main kingdoms, known as khanates, were Chorasmia, largely Turkmenistan, Bactria, northern Afghanistan, and Soghdia (in the area of Uzbekistan) lying between two main rivers Amu and Syr Darya. Fergana included Uzbekistan and Tajikistan and ran up to the Osh area of Kyrgyzstan, with the cities of Nisa, Merv, Samarkand, Piandjikent, and Bamyan.

The vast open areas were home to a number of tribes whose way of life was nomadic. They moved over the vast

steppe lands with their herds of sheep and camels, as well as their horses, which gave them the mobility to strike at powerful enemies and subdue them. The horse was in a way their lifeline, as they could travel long distances living on the mare's milk and the fermented kumis. The Greek historian Heroditus (484–425 B.C.E.) wrote about the tribes, describing their mobile homes (yurta) and the seasonal movement over vast areas. The description would still fit the way of life of some Kazaks, who inhabit the remote area of Noi in Uzbekistan, and the Torkomans of remote parts of Turkmenistan and the extreme northern part of Iran.

The nomadic way of life led to the development of a range of textiles for fabrics used for their homes as protection from the harsh elements, and also as woven, felted, and embroidered objects. These made up furniture, containers, habitat, clothing, objects that marked the rites of passage, and exchange that built social ties. The woven designs signified their identity; many motifs had an esoteric meaning, helping them to control the evil spirits that governed the unknown.

The fleece of the sheep provided wool for felting, creating the yurta, caps, shoes, and coats. Wool was also spun, crocheted, knitted, and woven into fabrics. Excavations have revealed felted fibers indicating that this art was known from Neolithic times. The frozen Pazyryk burials (400 B.C.E.) of the Scythians have led to the discovery of extraordinary felts with complex patterns, woven carpets of great fineness, and embroidered silks, which reveal the sophistication of the culture of these people, who were termed “barbarians.”

Trade was carried out by the tribes from very early onward with the Chinese to the east, as well as with the Greeks to the west. The Silk Road may have existed from an earlier time, according to some scholars, than the historic date associated with Emperor Wu-ti (145–187 B.C.E.). The fact that Emperor Wu-ti negotiated with the King of Fergana for brood mares and stallions indicates that he wanted to play an important role in the exchange of commodities.

The excavations at Loulan and Niya by Sir Auriel Stein revealed rich colored figured textiles, felt, carpets, tapestry weaves, and remnants of wool garments and other fibers for wrapping bodies for burial. The rich tradition of textiles shared by the area indicates close links with China. The trade contacts also brought influences from India, as well as the near east. Pliny (41–45 C.E.) mentions trading with Central Asia since ancient times. Some of the finest historical textiles after the discovery of the Scythian burial sites are the Sogdian textiles woven from the seventh to the ninth centuries. The weft-faced complex twill woven in silk has patterns enclosed in roundels with juxtaposed animals and birds similar to the Scythian traditions. A common motif is paired ducks facing each other with a tree of life between them, and juxtaposed lions enclosed in circular beaded enclosures—a device very com-

mon among Sassanian textiles. However, the delineation of the hunt is powerful and shows a remarkable linear strength and mastery over the technique.

Under the Mongol leader Ghenghis Khan, a large number of Turko-Mongol tribes—the Sakas, Scythians, Sarmatians, and others—were united and controlled the entire area. Khan brought many masters of craft traditions, which enriched the Central Asian traditions and added to the cultural heritage. Upon Khan's death, Central Asia was divided amongst his sons. Uzbek Khan, (1312–1340) a descendant of Ghenghis Khan's son, ruled a large area, converted to Islam, and along with his followers became prominent in the area as their faith unified the people. At the end of fifteenth century, the Uzbek army conquered much of Central Asian territory, mixed with the settled population, and created a dominant group, enhancing the area, which is now known as Uzbekistan.

The Timurid Empire, from the mid-fourteenth century to the end of the sixteenth century, was a period of abundant cultural development of the urban settlements of Central Asia. Emperor Timur Lang followed the precept of his ancestor Ghenghis Khan and brought many of the masters of arts and crafts to his capital, and Samarkand began to produce woven textiles, which could compare to the very best.

The nomadic tradition continued throughout the period, maintaining many of the woven techniques and woven patterns that reflected their identity and way of life. For instance, the hearth rug was central to the Torkomans' yurta and had deep significance as well as distinctive patterns. The subjugation of the tribe would mean the introduction of the pattern of the dominant tribe in the hearth rug.

Textile Materials

Wool was the most important fabric used, not only by the nomadic people but also by the settled population. Their flocks provided them with material, with men shearing and the women cleaning, sorting, and carding for spinning. Men, women, and children all spun the wool as they moved with their animals. Amongst the nomadic people, the women used local plants as the base and minerals as mordants and generally did dyeing. In the large urban centers such as Bokhara, Samarkand, and Fergana expert dyers were known for their skills. Two different groups of dyers were known in Bokhara, those who worked with cold dyes and those who used hot dyes. The cold dyes were the domain of the Jews in the area, while the hot dyes were the specialty of Tajiks and Chalas, who dyed mostly silk or cotton. Dyeing was considered to have mystic qualities. Its practice was kept a secret even from the daughters of the household, and a number of ceremonies and taboos were related to the practice.

Silk was obtained early from China, and there are Han records of 81 B.C.E. that talk of the importance of

trade with the Hsiung-nu (tribal people) for large quantities of gold, which reduced their resources and weakened the enemy. Silk was the dress of the elite and is still referred to as *padshaboki*, the king's cloth. Only those allowed to wear silk by the local ruler could use it, or else they could face imprisonment and even death.

Until the coming of the Soviet system of collectivization, sericulture was practiced as an individual activity in the rural areas or confined to small workshops in the towns. The process was quite primitive, and after the closure of the silk reeling factories in 1992, they returned to the old methods of processing.

Cotton was grown in the oasis from ancient times, and the women processed the cotton, ginning it by using traditional wooden hand rollers (*chirik*). It was then separated, rolled, and made ready for spinning with the use of a spinning wheel (*charakh*). The weaving of plain cotton (*carbos*) was done by the weavers. Very fine-spun thread was woven along with silk to produce the mixed silk and cotton fabric known as *adras* for which the area was famous and which was also in demand for exporting. Gold thread and silk embroidery was sought after for the rich garments worn by the elite and for the production of *khillats*, royal robes of honor presented to distinguished guests or for esteemed members of their own clan. Bokhara was known for its expert gold embroiderers.

Felting and Weaving Techniques

The techniques can be divided into nomadic and urban, though the distinction cannot be rigid. Among the nomadic people the women for their own use did weaving, while in the urban centers it was the work of men, though in some cases there were looms in the home, which were used by the women.

Felting was essentially a nomadic tradition and was carried out with pure wool. Two types of felts were created: the plain single natural color of the wool used for the making of apparel or for the yurt, and the patterned ones known as *alakhiz*. The patterns were integrated into the felt by laying the designs on a canvas with use of long slivers of loosely twisted dyed wool and then covering the pattern with finely carded single colored wool. The finest *namads* (Iranian artisan felt rugs) of inlay designs were made by the Torkomans and also by the Kyrgyz women, a tradition that was found in the Pazryz burial mounds. Sprinkling the fibers with water mixed with a soap solution and rolling them with the feet and hands would result in a thick felt. Shaped caps, coats, jackets, mittens, and shoes were also made and decorated with embroidery. Another popular form of patterned felt was the *shirdak* created by cutting dyed felt pieces and creating myriad patterns, which was a specialty of the Kyrgyzi.

Weaving of plain and twill weave woolen cloth for apparel was common and similar to the type found in ancient burial sites. The fine woolen weaving was for creation of shawls, which were used by men and women, as

well as fine cloth for the long gowns—*abas*—worn by the priests, as wool was considered pure. Very fine quality lengths were woven for the *imame* worn as turbans in earlier times. The shawls were woven with motifs on the border with silken dyed threads.

The mastery of the woolen technique was in the weaving of flat weaves for rugs and for hangings. Non-continuous weft weaving was used for *soamak* weaves with intricate multicolored woven patterns. Another technique with noncontinuous weft was the method of interlocking tapestry. Both of these techniques later evolved into highly specialized weaving traditions, the *termeh*, which is associated with the Persian shawl weaving, and *kesi*, an intricate form of silk tapestry with interlocking weave. Recent research has revealed examples of *kesi*, which appear to have all the characteristics of Soghdian textiles with a liveliness of the flow of the patterns and brilliant use of color. An interesting *kesi* of the thirteenth century in the Metropolitan Museum has floating leaves, buds, and flowers, with ducks swimming among them. It has the spontaneity of the Soghdian textile repertoire. The earliest *kesi* to be found is in Turfan, which dates to the sixth century C.E.

Soghdian brocades of silk were used for creating apparel, as well as for funerary cloth. Woven in weft-faced compound twill, its technique is quite distinct from the Chinese style of silk patterned brocade.

The settlement of Muslim weavers in Central Asia by Ghengis Khan, of which two settlements are mentioned in the records of the period, contributed greatly to the stylistic development of designs and techniques. Khan also brought weavers from China and settled them in Samarkand, leading to a blending of styles and technical skills. The greatest contribution is their expertise in weaving cloth of gold known as *nasij*.

Another important silk technique was the warp ikat known as *abr*. While the word means cloud, it here refers to the ikat technique and *khan atlas* for the pure silk of very fine patterns often woven with seven colors. Bokhara, Samarkand, and Fergana were the centers for these very dramatic fabrics with rich colors and bold patterns. Research being carried out by the newly opened Department of Cultural History in Uzbekistan has located Sukhandarya as a place where ikat silk was also woven. Known locally as *abrabandi*, the technique is generally seen as having been introduced rather late, in the eighteenth century, but it is likely that this technique was used much earlier. The degummed washed silk warp threads were marked by the *nishanzan* or the designers, who chose a range of patterns derived from the diverse repertoire of patterns of Central Asia. They include ram's horns, tulips, pomegranates, *kora-karga*, black ravens, the *badam*, almonds, peacocks, cloud motifs, *shonagul*, comb design, as well as bold *oi*, the circular moon motif in blue and the red sun motifs combined with a stylized dragon. During the Soviet era, they created *Ulag Oktyabr*, Octo-

ber Revolution, and Kremlin patterns. The most prized and complex patterns in the ikat technique were the *bakhmal*, the ikat velvet, which was highly valued and was reserved for the royalty.

The mixed cotton weft and silk warp-faced ikats known as *adras* were very popular as most households could wear these. Pure cotton striped ikat, *yalong doveran*, was also woven and was in great demand as only the royal household and those permitted by them were allowed to wear pure silk, while cotton could be worn by everyone. Often these were given to the *kudunggars*, the glossing workshop where the material was glazed with egg white and polished.

A range of cotton fabrics was woven. *Alacha* and *kalami* were fine striped cotton. One of the most popular striped materials was known as *mashku-zafar* and was woven with black and saffron-yellow. Textured cottons woven with threads of different counts created a rich effect and were known as *Salori bular*.

Central Asia has a tradition of printing on cotton and silk. It appears to have been practiced from ancient times, which is confirmed by the discovery of a fragment in an excavation carried out near Termez in Sukhandarya region of Uzbekistan. A fragment was also found in the fourteenth century C.E. grave of Bibi Kanum, wife of Tamerlane. The direct printing with the use of wooden blocks, *qalib*, was prepared in Bokhara, Samarkand, Fergana, Qorcom, Tashkent, as well as in Tajikistan bordering the Ferghan Valley. It is interesting that the word for printing is *chint*, which is also used in India. The printer is *chintsar*. *Chintsaz* is the word used in Isfahan, Iran, as well as in India. The carver of the blocks is known as *kolkbbhar*. Some scholars are of the opinion that possibly printing came from India. Research in India has, however, revealed that *chipa* for the printer and *chint* for printed cloth are not Sanskrit words.

The silk gauzelike cloth was printed with resist-printing near Bokhara in a town known as Chidgaron, which was known for its printing. Between 1840 and 1849, 2,500,000 printed cloth pieces of each were exported to Russia and Bokhara. Unfortunately the silk-resist printed scarves are no longer being produced.

Silk embroidery known as *suzan dozi* was practiced throughout Central Asia. The style of embroidery, however, was quite distinct even within the same tribe. Uzbekistan has the richest variation, the *suzani* of Nouratta has great delicacy and is quite distinct from that of Bokhara, Samarkand, and Sukhandarya. Some settled people use satin stitch, while stem stitch is used for the more delicate motifs. Chain stitch with the use of the needle or the awl is used specially for bolder work and that prepared on leather, suede, or felt. *Basma* is a form of couching used for either gold embroidery or for bolder work covering large areas, as for the *suzanis* used as tent hangings. One of the most interesting embroideries is the Lakai embroidery, which often uses wool for the embroidery and

has a bold primitive appearance and asymmetrical motifs. The embroidery of the Torkomans is very bold and done on silk with silken threads.

Gold embroidery often worked on velvet dresses was an essential part of the embellishment carried out on robes used by the royalty, their families, and court, and the robe of honor was often worked in rich gold thread. Bokhara was the most important center for this work, and many workshops specialized in this.

A range of techniques was prevalent and enriched the dress of the people of Central Asia. Their love of brilliant colors and bold patterns created a richness in the rather arid conditions of Central Asia.

See also **Dyeing, Resist; Felt; Ikat.**

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Jasleen Dhamija

TEXTILES, CHINESE Silk production, characteristic of China's earliest civilization, has been an enduring feature of Chinese tradition and a distinctive aspect of China's interaction with other cultures. From China's Neolithic era, hemp and ramie were cultivated and woven into textiles for clothing and other uses. Wool textiles played a minor role, associated with border peoples of the north and west. Cotton cultivation began at least by the eighth century. By the Ming dynasty (1368–1644),



SILK AND DIPLOMACY

The value of silks for diplomatic gifts was recognized early. Confucian texts of the third century B.C.E. mention the practice. During the Song dynasty (960–1279), some diplomatic gifts to border peoples included 200,000 bolts of silk.

In the first century C.E., Pliny the Elder wrote in his *Natural History* (Book XII, translation by H. Rackham, 1952, p.3): “This inspires us with ever greater . . . wonder that starting from these beginnings man has come to quarry the mountains for marbles, to go as far as China for raiment, and to explore the depths of the Red Sea for the pear.”

In 1912 Sir Aurel Stein (1862–1943) described the textiles found in the “walled up temple library,” at Dunhuang, including a large embroidery of a Buddha with bodhisattvas, an embroidered cushion cover with scrolling floral motifs, “a number of triangular headpieces . . . detached from their painted banners . . . composed either in their body or in their broad borders of pieces of fine silk damask,” and “a silk cover . . . intended for a manuscript roll” (Stein, pp. 207–210). The objects collected by Stein are now in the British Museum and the Museum of Central Asian Antiquities in New Delhi, India. Textiles were also collected at Dunhuang by the French archaeologist Paul Pelliot (1878–1945), now preserved in the Musée Guimet and the Bibliothèque Nationale, Paris. Another group of Dunhuang materials is in St. Petersburg, and more recent finds are kept in Chinese collections.

it had become an industry to rival silk production. Though silk retained its role as a luxury fabric and a symbol of Chinese culture, cotton cloth ultimately became a widespread material and an economic staple.

From the Han dynasty (206 B.C.E.–220 C.E.), silk manufacture comprised a major state-controlled industry. For thousands of years, along land routes through Central Asia and sea routes along the coasts of East and Southeast Asia, silk was both a major commodity and at times a standard medium of exchange. In China’s diplomacy, silk played a stabilizing role, bringing large areas of Inner Asia into the Chinese sphere of influence. At home, silk production was viewed as a moral imperative as well as a practical necessity. The Confucian adage, “men till, women weave,” expresses the essential role of the women in a household in preparing silk yarn and cloth. Later, an increase in industrial specialization encouraged a shift of women’s efforts from weaving to

needlework, and yet the spirit of the phrase was preserved. As late as the seventeenth century, the state collected taxes in silk as well as in grain, underscoring the essential value of this human endeavor. Ultimately, the uses of silk expanded to include textiles made for appreciation as art as well as for clothing and furnishings.

Elaborate techniques were developed for producing complex designs, both in the woven cloth itself and in embellishments worked onto the surface. Brocades, weaves with supplementary weft yarns creating complex patterns, were employed in many variations, including the complex lampas weave with its extra binding warps. *Kesi*, a tapestry weave, perhaps originally developed by Central Asians with wool yarn, came to be highly refined in the works of Chinese weavers of the Song dynasty (960–1279) and later. Embroidery, a means of embellishing a woven fabric with stitches made using a threaded needle, flourished throughout the history of silk textiles in China.

Historical and Archaeological Evidence

Needles have been found in some of China’s earliest inhabited sites. Abundant evidence of the making of fabrics from hemp and ramie has been found in sites of the fifth millennium B.C.E. Spindle whorls of stone or pottery found in these sites confirm the spinning of hemp or ramie fibers into threads for weaving and sewing. Components of what may have been a backstrap loom have also been identified. Impressions of woven materials on the bases of pottery vessels, such as those found at Banpo, Shaanxi province, suggest the varied uses of coarse cloth or matting, in this case to create a simple turntable for pottery making. Remains at sites of the Liangzhu culture of the Lower Yangtze River region confirm the initiation of sericulture by the third millen-



THE MANILA GALLEON

The fall of Constantinople in 1453 disrupted trade and led Europeans to find their own sea routes to Asia. Chinese silk textiles were included in the earliest voyages of the Manila galleon in 1573. According to the inventory by Antonio de Morga, president of the *audiencia* at Manila, Spanish traders bought:

raw silk in bundles, . . . fine untwisted silk, white and of all colors, . . . quantities of velvets . . . others with body of gold and embroidered with gold; woven stuffs and brocades, of gold and silver upon silk . . . gold and silver thread . . . damasks, satins, taffetas, . . . linen . . . cotton. (Schurz, p. 73)

nium B.C.E. Here can be found the earliest confirmed evidence of the development of the complex process of raising silkworms (*Bombyx mori*), harvesting the filaments from their cocoons and then reeling the silk and weaving it into cloth.

Shang (c. 1550 B.C.E.–1045 B.C.E.) and Zhou (c. 1045 B.C.E.–221 B.C.E.) Dynasties

Tombs of China's Bronze Age provide evidence that silk, like bronze and jade, was a luxury commodity, important for ritual use. The royal tombs at Anyang, Henan province, reveal that ritual bronze objects and also ritual jades were wrapped in silk before being buried as grave goods. In the tomb of Lady Fu Hao (twelfth century B.C.E.), more than fifty ritual bronzes are known to have been wrapped in silk cloth. Anyang silks included various weaves, damasks as well as plain (tabby) weave, and some examples were embroidered with patterns in chain stitch.

Spectacular finds of Zhou dynasty silks from the Warring States period (453–221 B.C.E.) are identified with the distinctive Zhou culture centered in China's middle Yangtze River valley. A tomb at Mashan, Hubei province (datable to the fourth century B.C.E.), yielded the following silks: a coffin cover, a silk painting, bags of utensils, costumes on wooden tomb figures, and nineteen layers of clothing and quilts around the corpse itself. Plain silks, brocades, and plain and patterned gauzes were included as well as embroidery in cross-stitch and counted stitch. Analysis of the complex and densely woven Mashan silks has led scholars to suggest that an early form of the drawloom must have been used to produce them.

Other well-known finds from the Zhou culture confirm the early use of silk as a ground for painting, specifically in two third-century B.C.E. pictorial banners used in funerary rituals and then buried with the deceased. A work known as the "Zhou Silk Manuscript," dated to circa 300 B.C.E., documents the tradition that early Chinese texts were written on silk cloth and bamboo as well as cast in bronze or carved on stone. Examples of shop marks have been found on silks of this period, including a brocade with an impressed seal, suggesting a growing respect for distinctive workshop products and the commercial value of textiles.

Archaeological finds outside China's traditional borders confirm the scattered early references to China's export of silk to neighboring lands. In the Scythian tombs at Pazyryk in the Altai mountains of Siberia (excavated in 1929 and 1947–1949) silks datable to 500–400 B.C.E. were found together with textiles of Near Eastern origin. This evidence gives credence to the belief that the Greeks had imported Chinese silk by the fifth or fourth century B.C.E.

Qin (221–206 B.C.E.) and Han (206 B.C.E.–220 C.E.) Dynasties

Having built the first empire of China, Qin Shi Huangdi (best known in the early 2000s for the 1974 discovery of

his "terra-cotta army") built a great palace. Among its remains have been found silks, including brocade, damask, plain silk, and embroidered silk. After the reconsolidation of the empire under Han imperial rule, silk production became a primary industry, with state-supervised factories employing thousands of workers who produced silks and imperial costumes. Officials were sometimes paid or rewarded with silk textiles. As stability declined at the end of the period, textiles and grain replaced coinage as a recognized medium of exchange.

The legacy of the former state of Zhou continued to flourish, as shown by the rich treasures found at the noble tombs at Mawangdui, Hunan province (second century B.C.E.). Here was preserved silk clothing in fully intact robes. In addition there were manuscripts, maps, and paintings on silk, including elaborate funerary banners showing a portrait of the deceased entering an afterworld of cosmic symbols and signs of immortality. Embroidered silks follow patterns seen in the earlier Mashan silks, using chain stitch worked in cloud-scroll patterns. Printed silks found at Mawangdui correspond to a relief stamp found in the tomb of the Second King of Nan Yue (in Guangzhou, datable to before 122 B.C.E.), providing confirmation that techniques and styles had spread throughout the empire.

Han tombs have yielded a variety of silks, including plain weave, gauze weave, both plain and patterned, and pile-loop brocade similar to velvet. More than twenty dyed colors have been identified. Embellishment of woven fabrics included new techniques of embroidery incorporating gold or feathers, as well as block-printing, stenciling, and painting on silk. Later Han silks include a striking number of woven patterns with texts, usually several characters with auspicious meanings. From pictorial representations, scholars have deduced that Han weavers used treadle looms.

Finds in remote areas have added to our understanding of production and commerce relating to silk textiles. Sir Aurel Stein found in Western China a strip of undyed silk inscribed by hand stating the origin, dimensions, weight, and price. A seal impression designates its origin in Shandong province in Northeast China. Other finds established the standard selva-to-selva width of Han silk, at between 17½ and 19½ inches (from 45 to 50 centimeters). At Loulan, in the Tarim Basin in the far Northwest of modern China (Xinjiang province), excavated by Stein (1906–1908 and 1913–1914), Han figured silk textile fragments (datable to the third century C.E. or earlier) were found together with an early example of slit tapestry woven in wool. The latter may be a precursor of the later *kesi* slit tapestry in silk. Finds at Noin-Ula, in northern Mongolia, dated second century C.E., give further evidence of the widespread exchange of silks throughout Asia. Although details of the trade are yet to be fully understood, comments by early writers make clear the admiration for Chinese silks in the Roman world.



The Birds and the Flower, National Palace Museum, Taiwan. In the Song Dynasty, textile production was fine-tuned with such artistry as the weaving of *kesi* tapestries and the development of needle-loop embroidery. THE ART ARCHIVE/NATIONAL PALACE MUSEUM TAIWAN/HARPER COLLINS PUBLISHERS. REPRODUCED BY PERMISSION.

Six Dynasties Period (220–589) and the Tang Dynasty (618–907)

Political disunity during the third to sixth centuries brought close interaction with Central Asia, leading to new styles and techniques relating to textile production. Tang silks reflect these closer contacts established during the previous centuries. The Tang maintained an open capital with foreigners among its merchants and varied ethnic and religious groups among its populace. A general shift in weaving techniques distinguishes Tang silk from that of the Han dynasty. While Han patterns were warp-patterned, the weavings of Tang came to be weft-patterned.

Some of the best Tang textiles survive in temples in Japan, where Chinese fabrics have been carefully preserved in Buddhist temples since before the eighth century. The most important of these holdings is that of the Shōsō-in (a storehouse dedicated at Tōdai-ji, Nara, in 756, for the donated collection of Emperor Shōmu), which contains various garments and other textiles believed to have been brought back to Japan by Buddhist monks returning from China.

Investigation of Chinese textiles was stimulated by stunning discoveries of well-preserved ancient textiles in Central Asian sites, including Sir Aurel Stein's expeditions in northwest China and inner Asia (in 1900, 1906–1908, 1913–1916 and 1930). Discoveries at Dunhuang's Buddhist cave temples yielded a new range of textiles for study, and brought about an early appreciation of the importance of textiles in Buddhist ritual. Such textiles were probably pious offerings made by Buddhists from Central Asia, especially Sogdiana, as well as from China. Many of the silks were sewn into banners or other adornments for Buddhist chapels, or into wrappers for sacred texts (sutra scrolls). A mantle (*kashaya*) for a Buddhist priest, its patchwork symbolizing the vow of poverty, was also found. Many of the silk textiles have bright patterns, woven or embroidered, while others were adorned after weaving by painting, printing, stenciling, or by dyeing using resist techniques including clump-resist, wax-resist and tie-dyeing. The weaving techniques documented in these finds include silk tapestry (*kesi*), gauze, and damasks, as well as compound weft-faced and warp-faced weaves that were probably woven on a drawloom. These finds confirm that patronage of Buddhism encouraged creation of pictorial textiles either woven in the *kesi* technique or embroidered with highly refined use of stitches (often satin stitch) to create representational effects.

Important examples of Tang silks have been found at Famen Temple, Shaanxi province. Here, a ritual offering datable to C.E. 874 included about 700 textiles including brocades (many with metallic threads), twill, gauze, pongee, embroidery, and printed silk. Among them was a set of miniature Buddhist vestments including a model of a *kashaya*, an apron (or altar frontal), and clothing, all couched with gold-wrapped threads on a silk gauze ground in patterns of lotus blossoms and clouds.

Song Dynasty (960–1279)

Song weavers brought refinement to textile technology, especially the weaving of satin and of *kesi* tapestries. Generally the use of gold and silver increased both in embroidery and in woven brocades. Needle-loop embroidery, a detached looping stitch sometimes combined with appliqué of gilt paper, came into use. In Song times as in the Tang, embroidery and tapestry were used for devotional Buddhist images, but now the techniques were also employed to create items for aesthetic appreciation, like paintings, in the form of scrolls or album leaves.

Jin (1115–1234) and Yuan (1279–1368) Dynasties

Silk played a major role in trade, diplomacy, and court life under the Jin dynasty, founded by the Jurchen, a Tatar people, and the Yuan, founded by the Mongols, both non-Chinese ruling houses. Jin and Yuan brocades, notable for rich patterning with gilt wefts of leather or paper substrate, have been a focus of recent exhibitions. Due to the open trade connections encouraged by the Mongol con-

quests, these silks spread widely. Examples reached the pope through trade and diplomatic gifts. Thus, the cloth of gold favored by Mongol leaders had its counterpart in the *panno tartarico* of fourteenth-century Europe.

Ming Dynasty (1368–1644)

By Ming times, weavers employed elaborate drawlooms using up to forty different colored wefts and incorporating flat gold (gilt paper) strips, gold-wrapped threads as well as iridescent peacock feathers to produce their brocades. The Yongle reign (1403–1424) saw a tremendous dedication of resources to the production of diplomatic gifts including textiles for Buddhist purposes, a practice carried over into the Xuande reign period (1426–1435). Excavations at the tomb of the Ming emperor Wanli (reigned 1572–1620) yielded two complete sets of uncut woven silk for dragon robes, as well as silk brocades and patterned gauzes marked as products of the imperial workshops in Nanjing and Suzhou.

By the late sixteenth century, cotton cultivation, which had been encouraged under the Yuan dynasty and expanded further under the Ming, became a major part of the Chinese economy. From at least Tang dynasty times, cotton had been used to make clothing for the lower classes (Cahill [p. 113] observes that “cotton-clad” meant a commoner in medieval Chinese poetry). In subsequent centuries, cotton cloth was associated with the virtues of humility. Ginned cotton was transported south from Henan and Shandong provinces, or shipped north from Fujian and Guangdong, to the Jiangnan region where it would be made into thread and woven into cloth. Cotton thread is noted among Chinese exports to Japan, and white cotton cloth as well as cotton garments of blue or white are recorded among the items exported on the Manila galleon.

Domestically, cotton found wide use in undergarments and in linings for silk (such as in silk garments for ceremonial use), and it also came to be dyed in bright colors and calendered to an attractively polished surface. The most distinctive artistic developments in Chinese cotton textiles are those that survive primarily in rural traditions and folk art relating to minority groups, including the Miao of Guizhou and Yunnan provinces. The primary techniques, resist dyeing (using stencils to apply a paste that would retain white undyed areas), and batik (using wax to reserve undyed areas), had been known in China, along with block printing, tie-dyeing, and clamp-resist, since the Han dynasty, and are found in silk examples preserved from the Tang period. The characteristic blue from indigo, typical of dyed cotton, also reflects an ancient tradition, recorded in detail in Ming dynasty texts.

Anthropologists and historians have noted a shift in importance among China’s women from activities in weaving to embroidery in the seventeenth century. Increasing specialization meant that finished yarn and finished cloth could be purchased routinely. This spurred a rising interest in embroidery among the gentry, and a re-

lated rise in the status of embroidery to verge upon that of the fine arts of painting and calligraphy. The Gu family of Shanghai, for example, came to prominence for their distinctive pictorial embroidery style. A manual of embroidery designs compiled by the scholar-calligrapher Shen Linqi (1602–1664), published in woodblock-printed form, set out themes and patterns that inspired embroiderers for centuries.

Qing Dynasty (1644–1911)

Study of Qing textiles has focused on the court collections, now in Beijing’s Palace Museum and in the National Palace Museum, Taipei, including wall decorations, curtains, desk frontals and upholstery fabrics, ceremonial and informal costumes, and works of art. When the Qianlong emperor, inspired by scholar-collectors of the late Ming as well as by the precedent of the Song Emperor Huizong (reigned 1101–1125), commissioned scholar-officials to catalog his art collections (producing the *Bidian Zhulin* and the *Shiqu Baoji*, published in 1744–1745, 1793, and 1816) these catalogs included examples of *kesi* and embroidery alongside painting and calligraphy. Qianlong himself may have selected works to be “reproduced” in *kesi*, including his own painting and poetry and works in his collection of painting and calligraphy.

The Qing emperors were Manchus whose homeland was in the far Northeast beyond China’s traditional borders. When they conquered China, they were quick to adopt the Chinese practice of using gifts of silk, particularly cloth for dragon robes, as a means to bring the powerful leaders of vassal states into their own military bureaucracy. The Qing forebears had been on the receiving end of this practice during the late Ming period. Silk had long been used to pacify border peoples; Song examples are striking, but the practice began before the Han dynasty. Most visible among textiles surviving up to the twenty-first century are the lavish silk brocades bestowed upon Tibetan nobles and preserved in Tibet’s dry climate until recent years.

Collecting and Study of Textile

Until recently, the study of Chinese textiles revolved around Beijing’s imperial palaces, a focal point for interest in Chinese culture after the end of Qing dynasty rule in 1911. In the years before the formal establishment of the Palace Museum within the former Forbidden City in 1925, many court costumes and other textiles were dispersed into collections worldwide. Western scholars took a keen interest in Chinese textiles as they came to know them through these court robes and interior furnishings. In recent years, collections have been technically analyzed and historically documented in studies carried out at the Association pour l’Étude et la Documentation des Textiles d’Asie (AEDTA), Paris; the Royal Ontario Museum, Toronto; Hong Kong Museum of Art; the Metropolitan Museum of Art, New York; the Cleveland Museum of Art; Los Angeles County Museum of Art; the Phoenix

Art Museum; the Chicago Art Institute; and the Minneapolis Institute of Arts.

See also **China: History of Dress; Silk.**

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Claudia Brown

TEXTILES, COPTIC An estimated 150,000 textiles were found in Egyptian burial sites that date from the late third to mid-seventh century C.E., Egypt's Coptic Period. Most of these grave goods were fragments of clothing and domestic textiles, but some were nearly complete costumes. These archaeological fabrics represent the fashions and furnishings of that distant time and place.

The Coptic Period

Egypt was conquered by Alexander the Great in 332 B.C.E., then colonized and ruled by Greek pharaohs, the Ptolemies. After 30 B.C.E. Egypt was ruled from Rome, later from Byzantium, and briefly from Persia prior to the Islamic conquest of 641 C.E. Christianity became the dominant religion during the Coptic Period. A "Copt" in early usage identified an indigenous Egyptian, but in modern usage only a Christian Egyptian is a Copt. After 451 C.E. the Coptic Church separated from the Roman Catholic Church. There are six million Copts in 2004. Christian burial practices were adopted after the prohibition of mummification in the fourth century C.E. The deceased were dressed in their garments, swaddled with other cloth, and buried in sandy, shallow graves; or, in some instances, in small brick-covered vaults. The dry desert climate preserved the textiles.

The Discovery of Coptic Textiles

Some Coptic textiles were discovered as early as the seventeenth century and others during Napoleon's expedi-



PHASES OF COPTIC TEXTILE ART

The conquest and colonization of one country by another creates a rich cultural brew that transforms indigenous art. Though Coptic scholars use different descriptive terms, they generally agree that the style of the tapestries and other pictorial textiles can be sorted into these broad categories:

Pre-Coptic

The Pre-Coptic category (first to late third centuries C.E.) includes only a few painterly examples.

Early Coptic

The Early Coptic, Proto-Coptic, or Late Roman-Egyptian category (late third century to fourth century C.E.) is dominated by Greco-Roman influence with themes drawn from nature and mythology. Subtle modeling with blended colors can be seen in the polychrome textiles and fluency of line is evident in the monochrome faces and figure drawn with the ecru linen wefts. Monochrome interlace and endless knot motifs are also popular and enduring.

Middle Coptic

The Middle Coptic, High Coptic, or Early Byzantine (fifth to mid-seventh century C.E.) is categorized

by the abstraction of naturalistic elements. Color areas, no longer blended, are separated by heavy outlines or juxtaposed. Faces and figures are distorted. Christian saints and symbols begin to replace the pagan iconography.

Late Coptic

The Late Coptic (mid-seventh to twelfth century C.E.) category extends into the Islamic period in which geometric patterns and calligraphic motifs supersede figurative art.

Polychrome and monochrome palettes were used throughout all phases and some popular themes, especially dancing figures and interlace patterns persisted. While there was continuity throughout the Coptic period in the construction, composition, content, and palette of the tapestries there were profound changes in the iconography. The naturalistic style of rendering faces, figures, and narrative vignettes was altered by abstraction, and familiar Greco-Roman motifs and themes were imbued with Christian messages.

tion to Egypt. Nineteenth and early-twentieth-century excavations at Saqqâra, Akhmîm, Hawarah, Karanis, and other sites by Theodor Graf, Wladimir Bock, Gaston Maspero, Sir Flinders Petrie, and other Egyptologists contributed to the textile collections of European museums. However, the impact of Coptic textiles on the history of clothing, fashion, art, and archaeology can best be understood by examining the career of the charismatic, but controversial, French Egyptologist Albert Gayet (1856–1916). He collected tens of thousands of textiles between 1895 and 1910, primarily from Antinoë (ancient Antinoöpolis), but also from Akhmim, Sheikh-Shata, Deir-el-Dyk, and Dronkah. Gayet believed he had discovered at Antinoë “. . . an efflorescent civilization to rival Pompeii.”

Gayet became known as “The Archaeologist of Antinoë.” Antinoë was founded in 130 C.E. by Emperor Hadrian. Drawings of Antinoë made during Napoleon’s 1804 expedition to Egypt reveal the grandeur of this Greco-Roman city with its broad avenues, impressive triumphal arches, temples, theaters, and baths. The city was colonized by cultured, literate citizens of Greco-Egyptian ancestry who called themselves the *New Hellenes*. Antinoë slowly declined after the seventh-century

Islamic conquest of Egypt. Eventually, even the architectural remnants of the city disappeared. By the time of Gayet’s excavations there was only a small mud-brick village called Sheik Abada at the site.

After each winter’s expedition to Egypt, the fabrics and artifacts—even mummies—were brought back to Paris for exhibitions by Gayet. His displays in Paris featured tunics, mantles, shawls, head coverings, leggings, shoes, socks, cushion covers, curtains, wall hangings, strips of precious silk, coats of cashmere, mummy portraits on linen, and woolen tapestry fragments decorated with flora, fauna, figures, geometric motifs, and narrative vignettes in polychrome and monochrome palettes. He presented lectures with dancers dressed in faux Coptic garments. During the Paris Exposition Universelle de 1900, Gayet displayed textiles at the Palais du Costume in “sensational tableaux.” The costume exhibit was for the “glorification of feminine fashion from the nineteenth century back through history to the Late Antique world.” In 1901 Gayet became a celebrity for his discovery of the mummy of Thaïs, a legendary fourth-century converted courtesan and popular heroine of Anatole France’s 1890 novel and Jules Massenet’s 1894 opera. Gayet estimated that he had uncovered forty thousand graves by 1902.

Eventually the Gayet acquisitions were doled out to the Musée du Louvre and other museums in France. Gayet collections are also in museums in Italy, Belgium, and Switzerland. Many Gayet textiles, sold to public and private collections, are now scattered around the world. Often early Islamic textiles are included in Coptic collections. No radical difference in the way cloth was made resulted from the political change, however, the iconography slowly segued toward the Islamic taste for non-representational art. Few of these early excavators preserved archaeological context or recorded sufficient documentation to accurately date the fabrics: clues in the cloth and design are all that remain.

Coptic Fabrics

The dominant fiber of Egypt's ancient and late antique fabrics is flax. The common Coptic linen yarn is an s-spun single (yarn spun in a clockwise direction), but z-spun yarns (yarn spun in a counter-clockwise direction), single or plied, are used with certain tapestry styles considered late and perhaps Near Eastern. The typical woolen yarn used during the Coptic period is an s-spun single. Occasionally z-spun yarns, and—in rare instances—plied yarns of two colored strands spun together are found. Silk, imported as fiber or fabric, was a rarity in Egypt. Soft weft (crosswise yarns) fibers of cashmere are found on some imported garments. Cotton and ramie are reported in Coptic and early Islamic fabrics. Precious gold thread can be documented on two separate pieces in French collections.

Linen, which does not readily accept dyeing, is typically undyed: wool readily accepts dyestuffs. Every color of the rainbow can be found in Coptic cloth. Blues were from indigo and woad; yellows from saffron, pomegranate, sunberry, weld, broom, iron buff, and safflower; reds from alkanet root, madder root, kermes, henna, and lac-dye; and purples from lichens and from the glands of shellfish of the *Purpuridae* family. The accepted theory among Coptic scholars is that wools were dyed in the fleece prior to spinning.

Horizontal ground-staked looms and upright vertical looms were in use in New Kingdom Egypt. The Alexandrian conquest brought warp-weighted looms to Egypt, but they were not extensively used. Pit-looms and upright Roman looms may have been used. There are tablet-woven textiles and sets of tablets that were discovered in Antinoé. Some type of loom with a pattern-making device, a precursor of the drawloom, was in use during the Coptic Period. The one-piece tunics so common in Coptic Egypt must have been woven on looms eight or nine feet wide.

Many types of fabrics were found in Coptic burial grounds: tabby or plain weaves, plaid tabby weaves, tapestries, tabby-tapestries, extended tabby or basket weaves, weft-loop weaves, warp-loop weaves, brocades, tapestries, taquetés (weft-faced compound tabbies), and samitums (weft-faced compound twills), resist-dyed tex-

tiles, warp-faced tablet weaves, sprang, knits, and some embroideries. Weaving was a guild or government controlled industry, but also always a cottage craft. The technical skills and artistry ranged from the rustic to the sophisticated and sublime.

There came into fashion in the late Augustinian age a "smooth cloth with woolen decorations." This is the quintessential cloth of Coptic Egypt, a combination tabby-tapestry (inserted tapestry) weave used for tunics, shawls, curtains, cushion covers, and large wall hangings. The basic fabric is a slightly warp-dominant tabby of linen warp and weft with an average sett of 56 ends per inch. The tapestry decorations are woven on the same linen warp with dyed woolen and ecru linen wefts. The transition from tabby to tapestry is typically achieved by grouping the warp in sets of two or more. This changes the average sett to 28/2 ends per inch and allows the weft yarns to pack down and completely cover the warp. Tapestry at this sett has a soft and wearable handle, not like the heavy, dense fabric of kilim rugs or medieval wall hangings.

Scholars believe that tapestry weaving came to Egypt with the Greek colonists. The tapestries of Coptic Egypt range in size from mere shreds of warp and weft to wall hangings nine yards long with nearly life-size figures. There are all wool tapestries as well as those of linen and wool. Weavers knew traditional methods of dealing with slits and joins. Early polychrome tapestries shade and blend color areas, while later pieces have separate segments of bold color. Some special techniques were used on the monochrome tapestries. Silhouette-style figures in white linen or dark wool yarn were woven on a mid-value background with a supplementary sketching-weft defining features on the tapestry faces and figures and patterns on a tapestry field.

Coptic Costume

The common costume of Coptic Egypt—as ubiquitous as blue jeans are in the early 2000s—was a tunic with tapestry embellishment. The one-piece tunic of tabby-tapestry was woven from cuff-to-cuff on a hem-to-hem loom width with a slit for the neck opening. To finish the garment the fabric is folded at the shoulder line and seamed up the sides. Some tunics were woven in sections on a narrow loom and then pieced together. Tapestry cuff bands, shoulder or knee medallions, yoke panels, hem bands, and clavi (weft-wise bands) decorate the tunics. The clavi, which become the vertical strips of tapestry running down the front and back of the tunic, can be recognized as an early twenty-first century priestly stole. Men's decorations were typically monochrome, while the women's were often polychrome. Though there are variations in the size and arrangement of tapestry embellishments, the tunic stays in style for nearly a thousand years. Precious tapestry remnants were recycled and appliquéd on other tunics. Brocaded bands, tablet-woven bands, scraps of patterned taqueté or samitum, and some

separately woven tapestry bands were sewn to tunics. All wool tunics, decorated with tapestry and some with hoods, were also found. In frescoes, mosaics, and both secular and sacred manuscript illustrations from the early medieval world one can identify the same type of cloth and costume found in the necropolis of Coptic Egypt.

The *Antinoé Riding Coat* is an elegant knee-length coat nipped in at the waist with long flaring sleeves. Though found in Antinoé, they are considered Near Eastern. The coats of wool or cashmere were dyed a luscious red or blue-green. Scraps of delicately patterned silk samitums—the first draw-loom fabrics found in the western world—were used as facings and trim on these garments.

Shawls of linen tabby-tapestry textiles decorated with lavishly colored flowers, dyed woolen shawls, and perhaps silk scarves for the wealthy were worn over tunics. Patterned taqueté woolens, that Gayet found used as duvet covers, were probably reused mantle fabrics. Tapestry leggings, knit socks, leather mules embossed with gilt, and leather sandals with perforated straps were all found in Coptic graves. Hairnets of sprang, as well as bags, made of linen or linen and wool were a fashion item of the day. A *bourrelet de chenille* is an unusual women's head ornament worn to frame the face. A *bourrelet* is a roll of material and *chenille* is French for caterpillar—an apt description for this fuzzy roll of multicolored, long woolen weft-loops on a linen fabric. Thaïs is illustrated in Gayet's book wearing a *bourrelet de chenille*.

Gayet's many exhibits of Antinoé textiles—especially the one he created for the Palais du Costume at the Paris exposition of 1900—inspired costumes for opera, theater, silent films, and even a haute couture gown by Mariano Fortuny. Embroiderers could find Coptic patterns in three booklets published by Dollfus-Meig Company. Rodin collected Coptic textiles. Matisse and other Fauve artists, fascinated by Coptic tapestry art, discovered a new way of interpreting color, shape, and archaic scenes. The impact of Coptic textiles continues with new excavations, exhibitions, and publications.

Gayet believed that the exploration of Antinoé was “. . . the resurrection of a lost world” and the artifacts “. . . of inestimable value for the history of art.” His dream of an Antinoé museum was never realized, but the textiles discovered by Gayet—once quotidian cloth—grace modern galleries of museums around the globe. The diverse textile themes, techniques, and technology reflect influences from the languishing classical, flourishing Christian, and emerging Islamic world.

See also **Dyes, Natural; Loom; Textiles, Byzantine; Weave Types.**

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Nancy Arthur Hoskins

TEXTILES, JAPANESE Textiles have long played an important role in Japanese life. Japanese weavers and dyers used silk, hemp, ramie, cotton and other fibers, and a range of weaves and decorative treatments, to produce textiles of distinctive design and exceptional aesthetic merit. These textiles were put to many different uses: for clothing of both commoners and elites; for banners, hangings, and other materials produced for use in temples; for theatrical costumes; and for cushion covers, curtains, and other domestic uses. As with many other Japanese arts, Japanese textiles historically have developed through an interaction of external influences and indigenous techniques and design choices, and a tendency to develop both technology and aesthetics to a high degree of refinement.

Historical Overview

The original inhabitants of Japan (people of the Jōmon Culture) wove cloth of plant fiber. Invaders from the northeast Asian mainland established the Yayoi Culture in Japan beginning around 300 B.C.E., introducing more sophisticated materials (including ramie and silk) and techniques. But a recognizably Japanese textile culture can be said to have begun in the Yamato Period (c. 300–710 C.E.), when aristocratic clans and the emergent monarchy led to a greatly increased demand for fine fabrics, especially of silk. The introduction of Buddhism in the mid-sixth century swelled the demand for fine textiles for ecclesiastical use. Some of these textiles were imported from mainland Asia, but increasing amounts were produced in Japan. Weavers, dyers and other textile workers from Korea and China were encouraged to settle in Japan under court patronage; the production of textiles was both patronized and regulated by the state, and the best textiles were produced in imperial workshops.

Silk fabrics in both plain and twill weave were often dyed in solid colors or in patterns produced by stamped wax-resist dyeing. Brocades were produced for both aristocratic and temple use. Other techniques included appliqué, embroidery, and braiding.

The explosive growth in the number, wealth, and power of Buddhist temples in the Nara Period (710–785) led to an intensified development of textile arts, as well as the importation of mainland textiles on a massive scale. The ensuing Heian Period (795–1185) saw a greater emphasis on domestic production, partly in imperial workshops and partly in private ones. This period saw the continued importance of brocade and embroidery, along with increased use of pattern-woven cloth as a ground for patterned dyeing, whether done by wax- or paste-resist methods or various techniques of shaped-resist dyeing. As the harmonious use of colors in multiple layers of clothing was one of the chief aesthetic principles of dress in this era, great efforts were made to expand and perfect dyeing methods.

The Kamakura (1185–1233) and Muromachi (1338–1477) periods saw the establishment of military rule under the auspices of the samurai (warrior) class. International trade increased again during this period, bringing a wealth of new materials, techniques and design motifs to Japan. Cotton was introduced at this time, largely supplanting the use of hemp fiber in textiles used by commoners. The development of the Nôh theater under the patronage of the military aristocracy during the Muromachi Period, with its attendant demand for luxurious and brilliantly beautiful costumes, stimulated textile production and innovation. The introduction of multi-harness looms and improved drawlooms led to an increase in production of complex silk fabrics such as damask and satin, which often were used as background fabrics for patterned dyeing (damask) and for embroidery (satin).

After more than a century of civil warfare (1477–1601), the establishment of the Tokugawa Shogunate (1601–1868) brought an era of renewed peace and prosperity to Japan. By the sixteenth century the *kosode* had become established as the basic garment of Japanese dress; the rapid growth of cities, and of well-to-do urban populations, made this and ensuing forms of the kimono a focus for textile arts. Sumptuary laws designed to prevent commoners from wearing brocades and other complex textiles simply stimulated weavers and dyers to produce surface-decorated fabrics of exceptional beauty and variety that stayed within the letter of the law. The growth of urban pleasure quarters inhabited by courtesans who sometimes could command gifts of great value stimulated the brocade-weaving and tapestry-weaving industries, as demand grew for elaborate and luxurious sashes (*obi*) with which women fastened their kimonos. Meanwhile, in the countryside, peasants were establishing or maintaining their own techniques for weaving and dyeing cotton fabrics, often in distinctive regional styles.

The abolition of military government and the restoration of imperial rule in 1868 led to a period of rapid modernization in Japan. There was a significant vogue in the late 19th century for Western clothing for both men and women; in the early twentieth century, however, many women returned to wearing kimonos much of the time. Following World War II, kimono wearing declined again, becoming limited by the 1960s almost entirely to festival and special-occasion dress, or occupational dress for women in the hospitality industries. The traditional textile arts had already entered a long period of decline by the late nineteenth century, when Japan turned to the industrial production of textiles as an early step toward economic development and modernization. Cheap machine-made fabrics cut deeply into the peasant production of handwoven and hand dyed cotton cloth. Conscious efforts to maintain or revive old textile traditions has kept many techniques from disappearing entirely, but the hand production of textiles in Japan now belongs almost entirely to the world of art and craft.

Woven Textiles

The weave types most commonly encountered in Japanese textiles, regardless of the fiber used, are plain (tabby) weave, twill weave, satin, damask and other patterned weaves, and brocade.

Silk fabrics intended for use in kimono in which the principal decorative elements are batch-dyed or resist-dyed rather than woven or embroidered are usually made in plain weave or damask weave. Colored damasks (*donsu*) employing dyed silk warp threads and weft threads in contrasting colors were used without further dyeing or embellishment; colored damasks were particularly favored for decorative purposes, such as mounting fabric for scroll paintings, and in cloths employed in the tea ceremony. Floating-weft or floating-warp satin (*shusu*) is often used for silk garment fabrics in which the main decorative elements will be applied by embroidery. Patterned twill (*aya*) and twisted-warp gauze (*ra*), often in lightweight, semi-transparent fabrics, have been used for garments since the Nara period, and in later times were especially favored for the wide, loose trousers (*bakama*) and stiff jackets (*kamishimo*) worn by samurai on formal occasions. Twill is frequently also used as the ground weave for a multicolored, brocade-like, drawloom-woven fabric called *nishiki*.

Brocades and tapestry weaves of various kinds were used in ancient times for Buddhist ecclesiastical garments and temple decorations. As garment fabrics they are used especially in obi sashes, which are often tied in very elaborate and decorative ways that display to good effect the luxurious textiles of which they are made. Both obi and kimono, the latter particularly as costumes for Nôh dance-drama, are often made of *kara-ori* ("Chinese weave," i.e. weft-float brocade), a stiff, heavy fabric in which supplementary weft threads on bobbins are float-woven by hand over a plain or twill background fabric.

Fingernail tapestry (*tsuzure*), as the name suggests, is a bobbin-woven tapestry, capable of producing patterns of extreme complexity, and often used for obi.

Plain weave is by far the commonest weave for cotton fabrics. Rural, or faux-rustic, cotton textiles in stripes and plaids of indigo and other vegetable-dye colors, were extremely popular during the Tokugawa period for informal kimono; such fabrics were also used for domestic décor such as covers for sleeping mats and sitting cushions. Plain-woven textiles of plain white cotton were used as the ground for a wide range of dyeing techniques, described below.

Dyeing

Much of the distinctive beauty of Japanese textiles rests on the use of highly developed techniques of dyeing, including paste-resist, shaped-resist, and ikat, as well as composite techniques employing two or more of these methods in concert.

Wax-resist dyeing (*batik*) was known in ancient Japan, but was abandoned by the end of the Heian Period in favor of paste-resist methods, employing a thick paste of rice flour instead of wax. Paste-resist methods include stencil dyeing and freehand dyeing.

Stencil dyeing (*katazome*) employs stencils made of mulberry bark paper, laminated in several layers with persimmon juice and toughened and waterproofed by smoking. Patterns are cut into these stencils using special knives. Paste is forced through the openwork of the stencil onto the cloth, where it then resists taking the dye when the cloth is immersed in a dyebath. The paste is washed from the cloth after dyeing. Simple stencil dyeing is most commonly found in folk-art indigo-dyed cotton textiles, used for domestic furnishings as well as for clothing. The most common contemporary application of paste-resist dyed indigo-and-white cotton cloth is for *yukata*, cotton kimono used as sleepwear and for informal streetwear, especially at hot spring resorts. Stencil dyeing can also be done in two or more stages to produce a multi-colored result.

Freehand paste-resist dyeing (*tsutsugaki*) uses a waterproof paper cone to apply paste to the fabric; this technique is often employed to create large, bold patterns such as are found on shop curtains (*noren*) and package-carrying cloths (*furoshiki*).

Shaped-resist dyeing techniques are generically known as *shibori* in Japanese; the word is commonly translated “tie-dyed,” but that does not convey the very wide range of techniques involved in *shibori* dyeing. *Shibori* includes resists created by sewing portions of cloth in tight gathers; or by twisting cloth, often in complicated ways; or by folding cloth and then compressing it between boards or in wooden or paper tubes; and similar techniques. In every case the aim is to compress portions of cloth so that they will be unaffected by the dye when the whole cloth is placed in a dyebath. Although expert prac-

tioners can achieve a high degree of control over the process, *shibori* dyeing always also includes some element of accident or uncertainty, which adds to its aesthetic appeal. Undyed areas of *shibori* textiles can be embellished in various ways, including hand-application of dyes using brushes, embroidery, or by using paste to apply gold or silver foil to the fabric.

Ikat, known as *kasuri* in Japanese, is a technique in which warp yarns, weft yarns, or both are bound in thread in pre-arranged patterns and dyed. The yarns are then assembled into a warp and/or woven as weft in the proper sequence, the pattern emerging as the weaving progresses. Kasuri textiles are produced in silk, in a wide range of colors; in ramie; in cotton, typically indigo-dyed; and in Okinawa in banana fiber, often with several colors produced by successive wrappings and dyeings of the yarn.

Yuzen, invented around 1700, is probably the most famous of Japanese dyeing techniques. It is produced by a combination of either freehand or stenciled paste-resist work and hand-application of dyes. With the cloth (either silk or cotton) stretched on a frame, a pattern is applied with a fine brush using a non-permanent blue vegetable dye, and then covered freehand with paste; or else the paste is applied directly with a stencil. A thin soybean extract is then brushed over the entire cloth. The cloth is then moistened with water, and dye is applied by hand with brushes; the dye spreads on the damp cloth to produce the color-shaded effect characteristic of *yuzen*. *Yuzen* is capable of achieving color effects of astonishing subtlety and complexity, and is used to produce the finest and most prized of all kimono fabrics.

The Okinawan art of *bingata* stencil dyeing can be thought of as a paste-resist version of batik. It uses multiple steps of stencil-applied paste and dyeing (either by vat dyeing or by hand application of dyes), with dyed areas covered with paste resist in subsequent stages of work. *Bingata* is typically produced in bright colors and with pictorial motifs of birds, flowers, and landscapes.

Embroidery

Like brocade and tapestry weaving, embroidery arrived in Japan in ancient times in connection with Buddhism, and was often used to produce pictorial hangings for use in temples. Japanese embroidery uses a fairly small repertoire of stitches, including French knots, chain stitch, satin stitch, and couched satin stitch. In garments, particularly kimono, embroidery is applied to vat-dyed plain weave silk textiles, to silk satin, and as an embellishment to textiles decorated with various dye techniques, including *shibori* and *katazome*.

Decorative Stitching

Japanese farm women developed a technique for salvaging worn cotton textiles for re-use by stitching them together in layers for use in jackets, aprons, and other protective garments. The technique, akin to quilting, is

known as *sashiko*, and developed from a practical way of using cloth to a unique craft of decorative stitching. *Sashiko* is almost always done with white cotton thread on indigo-dyed cotton cloth. Stitches may run parallel to the warp, or to the weft, or both; patterns are usually geometric, and often elaborately lacy.

Ainu Textiles

The Ainu are the aboriginal inhabitants of Hokkaido, the northernmost main island of Japan; their ancestors were among the original occupants of Japan, prior to the arrival of the Yayoi people. Ainu culture is closer to that of Sakhalin Island and other parts of northeastern Siberia than it is to Japanese culture. The Ainu are known for preserving old techniques of making jackets and other items of clothing decorated with appliqué and embroidery in bold, curvilinear designs, often in light colors on a dark background.

Contemporary Japanese Textiles

The status of textiles in contemporary Japan can be considered in four categories. *Commercial textiles* are a declining industry in Japan. Textile production, particularly of man-made fiber textiles such as rayon and polyester, played an important role in Japan's postwar economic recovery, but has been in decline in recent decades as production has moved to countries with lower labor costs. Some silk is produced in Japan by the country's heavily subsidized agricultural sector.

Traditional textiles continue to flourish. The Japanese government encourages the preservation of traditional arts and crafts through subsidies to "Holders of Important Intangible Cultural Properties," colloquially known as "Living National Treasures." These master practitioners of their arts provide leadership to thousands of other full-time craft workers. Of approximately 100 Living National Treasures at any time, about one-third are in the field of textile arts. Notable examples include brocade weaver Kitagawa Hyôji, the late stencil paste-resist dyer Serizawa Keisuke, and *yuzen* dyer Yamada Mitsugi.

Fashion textiles have received significant support from some of Japan's internationally famous fashion designers, notably Issey Miyake, whose innovative use of such material as tube-knitted jersey has bolstered Japan's fine textile industry.

Art textiles, or fiber arts more broadly, are a thriving field of Japan's contemporary art scene, and have achieved international recognition through such exhibitions as "Structure and Surface" (New York, 1999) and "Through the Surface" (London, 2004). A number of individual fiber artists have won international reputations, including Arai Junichi, known for his innovative use of techno-textiles; Sudo Reiko, known for her sculptural woven fabrics; and Tomita Jun, who uses traditional dyeing techniques to produce contemporary textile art.

See also **Dyeing; Embroidery; Ikat; Kimono; Yukata.**

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John S. Major

TEXTILES, MIDDLE EASTERN Even before the Islamic period, the Middle East was a nexus of Eurasian textile production and trade. The complex of trade routes commonly referred to as the Silk Road reached their western end at the ports of the eastern Mediterranean. Inevitably these markets were also centers of textile production. The spread of Islamic rule in the seventh and eighth centuries encompassed and incorporated the previous textile industries of the Byzantine and Sassanian Empires. In the early Islamic period textile design was derived from that of their predecessors, but Islamic cultures soon evolved their own forms of expression. During the Middle Ages, the textiles of the Middle East were highly prized goods that in due course stimulated the development of indigenous European production. The connection between Islamic and European cloth can be seen in the extensive textile terminology that is derived from Persian, Arabic, or Turkish, including terms such as damask, taffeta, cotton, muslin, seersucker, and mohair.

In the Islamic world, textiles were highly valued goods, accepted as tribute in lieu of taxes in some periods. Gifts of textiles and garments were presented to honor officials or visiting ambassadors. In a part of the world where much of the population could claim nomadic antecedents, interiors were primarily furnished with textiles, used to cover floors, walls, cushions, and to create beds and storage of all kinds. Gifts were presented in a textile wrapper, and the more elaborate the workmanship of the wrapper the greater the honor intended. Textiles were also held to have the power to protect or harm, and so inscriptions and symbols were frequently incorporated into them to this end. In the century following the death of Muhammad, representation of living creatures were banned, particularly in the Sunnī tradition. Islamic design developed its own metaphorical language, utilizing geometry, calligraphy, vegetal, and architectural forms. However, it should be pointed out that in some Islamic textiles human and animal figures do appear, particularly in Persian and Central Asian silks and carpets.

Silk

Elaborately patterned silk textiles were produced throughout the Islamic world in various complex weaves, including compound twills, lampas, and brocades, as well as double and triple cloth. Motifs were stylized and var-

ied greatly depending on the period and region. Simpler textiles including *tafta* and satin weaves were also important and numerous, as were a variety of very light-weight silks. In addition, there were textiles in which silk warp and cotton weft were combined, frequently striped. In the rep weave known as *alaca* the silk warp (yarns stretched on the loom) covered the cotton weft (yarns interlaced with the warp) to produce an economical silk textile. In the satin weave known as *kutnu* the silk warp shows on the face of the fabric, but the back shows the cotton weft. This textile was widely favored because according to Islamic tradition men were forbidden to wear silk against the skin. Tapestry technique was another important category of silk weaving.

One of the most characteristic early Islamic silk textiles was *tiraz*, which was particularly important from the tenth to fourteenth centuries. It was a product of royal workshops. *Tiraz* textiles were embellished with borders containing inscriptions, usually embroidered or tapestry woven in gold thread. Baghdad was the best-known source of *tiraz*, but it was produced in workshops sponsored by many rulers in many locations from Egypt and Yemen to Syria and Moorish Spain. These borders appear most commonly as bands on the upper sleeve, but were also used on the edges or in the body of the garment. They were also found on burial shrouds and ceremonial textiles. The inscriptions usually included the name of the current ruler as well as religious quotations. *Tiraz* embellished garments were worn by high-court officials and presented as honorific robes. Linen or cotton textiles might also have *tiraz* bands.

The Moorish conquest of Spain beginning in the eighth century led to the introduction of *tiraz* workshops, as well as workshops for the production of compound-weave silk textiles. These silks might resemble the textiles of late Byzantine or Sassanian workshops, but soon Spanish workshops were producing distinctly Islamic motifs, including elaborate geometric designs as well as stylized floral designs. Spanish textiles were varied, but strongly contrasting colors and geometric motifs were common.

Bursa was the most important center for silk production in the Ottoman Empire from the fifteenth century on, although not the only producer of high-quality silk textiles. Ottoman silks were richly colored, and frequently featured large-scale patterns. Although in the fifteenth century Ottoman textiles could be said to have influenced Italian silk design, thereafter Italian design influenced some Ottoman silks. However, many designs were distinctively Turkish, showing an affinity with Ottoman miniature painting and tile design. These featured stylized flowers, foliage, and vines. A common motif was a cluster of three circles in combination with wavy lines. The Ottoman repertoire included voided velvet as well as other compound weaves. Fine silk embroidery, done on silk, velvet, linen, or cotton, was another important category of Ottoman textile work.

Safavid Iran produced exquisite silks that were considered to be among the finest in the Islamic world. Yazd in the fifteenth century and Isfahan and Kashan in the sixteenth and seventeenth centuries were among its most important centers of production. Elaborate voided velvets and a wide array of intricate compound weaves, as well as fine embroidery were characteristics of Persian silks. Persian designs were finely detailed with complex coloring. A distinctive group of Persian textiles used human and animal figures, done in the style of miniature painting. The most elaborate of these woven textiles included scenes from Persian literature. Silk embroidery was also an important category of Persian textiles. The fine quality of Persian silk fibers contributed to the high quality, and made Persian raw silk highly sought after by foreign merchants. Persian textiles also influenced Moghul India.

Cotton and Linen

A variety of types of flax were raised in the Islamic world, as well as other types of bast fibers, including hemp. Both cotton and linen textiles were widely used throughout the region. These textiles ranged from the heavy cotton canvas produced for sailing ships to extremely fine muslins and gauzes. Although India is best known for fine cottons, all of the countries of the Levant also developed their own fine cotton weaving industries. However, trade with India for textiles was important for the entire Muslim world.

Textile printing was known in pre-Islamic Egypt, but dating and provenance of early Islamic printed textiles is generally not clear. Printing blocks have been identified from the Fatimid period, and a number of examples found in Mamluk Egypt are believed to have been produced there. By the sixteenth century a printing industry existed in Syria, and in the seventeenth and eighteenth century this industry expanded into Anatolia, stimulated by the expanding European demand for Indian printed textiles being transported through the Eastern Mediterranean ports.

Mohair, Wool and Other Animal Fibers

Mohair and camel hair, as well as the goat hair referred to variously as cashmere or pashmina, were used to weave soft and beautifully patterned shawls in many locations throughout the Islamic world. These shawls became very popular in the west in the nineteenth century, but had long been a feature of dress in Muslim northern India, Persia, and Ottoman Turkey. The patterns were woven in twill tapestry or a variety of compound weaves, but in either case featured elaborately patterned and colored designs. Some of these were patterned stripes. Many were complex vegetal designs, the most well-known example of which is the *boteh*. The *boteh* is also referred to by other names depending on the language of the weaver. In the west this design came to be known as the paisley motif, named after Paisley, Scotland, where textile mills produced copies of the Indian shawls in the latter nineteenth century.



GLOSSARY OF TECHNICAL TERMS

Compound (twill, weave): An adjective applied to any fabric or weave in which there are two or more sets of yarns in the lengthwise, the crosswise, or in both directions.

Lampas: Fabric with a woven figure in which crosswise yarns form the design and a second warp yarn holds the crosswise design-forming yarns in place.

Tafta: A fabric made from tightly twisted silk ply yarns in a plain weave.

Rep weave: Plain weave fabric in which crosswise yarns are larger than lengthwise yarns, thereby forming a pronounced crosswise rib.

Tapestry weaving: A handweaving technique in which crosswise (weft) yarns create a solid color patterned effect in selected areas (1) by being so closely packed that they completely hide the lengthwise (warp) yarns and (2) by not crossing the entire width of the fabric, but instead moving back and forth in the area of the design. In this way patterns of great complexity and size can be made.

Voided velvet: Velvet fabric in which the pile (standing fibers or loops) is limited to selected areas in order to form a design.

Although wool was widely used to produce a variety of apparel textiles, the best known Islamic wool textiles are the pile and flat woven textiles made as rugs, bags, bands, wall coverings, cushions, and other household equipment. Knotted pile weaving seems to have originated in Central Asia well before the date of the oldest known example, which was made about 2,500 years ago. The oldest examples of Islamic carpet weaving that have survived are the ninth century “Fostat” carpet fragment found in Cairo, and a group of thirteenth-century Seljuk Turkish fragments found in Konya in Central Anatolia. Sixteenth-century examples from Mamluk Egypt and Safavid Persia both attest to a sophisticated and long-established tradition. Carpet design can be divided into three categories that reflect their visual style, origins, and degree of technical excellence. The tribal carpets were produced by nomadic or village households primarily for their own use. The designs reflect tribal and regional affiliations, and tend to be relatively geometric in design. Although some are quite finely woven, many are relatively coarse. Court carpets were commissioned in court ateliers according to designs created by the finest artists of the day. These designs, which often bear a close relation to those of tile work, manuscript illumination, and silk textiles, are technically the most finely knotted, and visually the most intricate. Urban manufactory carpets constitute the third category. These carpets, produced under the direction of merchant entrepreneurs, may be technically very fine, but are characterized by somewhat more repetitive and less intricate designs as compared to court carpets.

Flat weaves include a variety of techniques, the best known of which include *kilim* (slit tapestry), *jajim* (compound discontinuous brocade), and *soumak* (warp wrapping). Card-weaving is a widespread method of making

bands that appears to have a long history of use throughout the Islamic world. These techniques and others are used to create floor and wall coverings, storage bags, tent bands, and door panels, as well as animal trappings. Generally flat woven wool textiles were produced primarily for local use and are characterized by distinctive tribal or regional designs and color palettes. Modern production, however, is increasingly tailored to the color and design preferences of western markets.

Dyeing and Finishing

In the early twenty-first century much of this traditional production has been lost as modern textiles replace traditional ones. Where traditional textile production continues, the products are being transformed as the weavers seek to adapt to modern taste and lifestyles.

See also **Iran, History of Pre-Islamic Dress; Islamic Dress, Contemporary.**

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Charlotte Jirousek

TEXTILES, PREHISTORIC Textiles require long, pliable string-like elements. The earliest current evidence for human awareness and manufacture of string comes (as impressions on clay) from Pavlov, a Palaeolithic site of about 25,000 B.C.E. in the Czech Republic. Thin, breakable filaments of plant-bast fiber were twisted into longer, stronger threads yarns that were then twined as weft (crosswise yarns) around the warp (lengthwise yarns) and around each other to make net-like fabrics. These fabrics are sophisticated enough that this cannot be the very beginning of either thread-, yarn-, or net-making. Other slightly later finds, plus the fact that all human cultures know the art of making string, confirm that this technology began in the Palaeolithic and spread everywhere with the human race. Indeed, string-making probably made it possible for humans to spread into difficult eco-niches, since it improves hunting/fishing capabilities and enables food-packaging.

Interestingly, a few of the so-called Venus figures (hand-sized carvings of women, usually plump, dating to about 20,000 B.C.E. and found from France to Russia) wear garments clearly fashioned of string: string skirts, bandeaux, or netted caps. These garments seem to signal information about marital status.

The first proof of true weaving occurs circa 7000 B.C.E. at the start of the Neolithic, with impressions of plain-weave and basket-weave on clay at Jarmo (north-east Iraq) and a pseudomorph (minerals having outward characteristics of organic materials) of a plain-weave textile on a bone at Çayönü Tepesi (southern Turkey). Again, these fabrics are too well done to be the start of weaving. Over the next millennium, fragments and impressions of mats, baskets, and twined textiles are found scattered through Iraq, western Iran, Turkey, and the Levant. Sizable pieces of linen actually survived in a desert cave at Nahal Hemar, Israel, circa 6500 B.C.E.; one needle-netted piece adorned with stone buttons is apparently a ritual hat.

Around 6000 B.C.E., at Çatal Hüyük in central Turkey, there was such a preponderance of plain-weave over twining, among the many fragments of linens used to wrap ancestral bones, that one can conclude the heddle (mounted loop) that forms a harness to separate warp yarns in a loom had been invented. (True-weave fabrics ravel easily, unlike twined ones, so the only advantage to



GLOSSARY OF TECHNICAL TERMS

Bast fiber: Fiber that is obtained from the stem of a plant. Examples include linen from the flax plant, ramie, and hemp.

Heddle: Device on a loom through which each lengthwise yarn (warp yarn) is threaded that allows warps to be raised and lowered during weaving.

Kemp: Straight, short, stiff, silvery white fibers in wool fleece that do not spin or dye well.

Kermes: Natural red dye used since ancient times that is made from the eggs obtained by crushing the bodies of a tiny female insect parasite found on oak trees.

Overshot: A type of weaving in which an additional set of crosswise yarns extend across two or more lengthwise yarns in a plain background weave to form a pattern or design. Pile fabric surface on which fibers, yarns, or raised loops that may be cut or uncut or stand up on the surface of a background fabric.

Pseudomorph: When used in reference to textile evidence found in archeological sites, a mineralized imprint of textile yarns or fabrics.

Selvage: The lengthwise edge of a woven fabric that is often made with heavier yarns and woven more tightly than the rest of the fabric in order to make this area strong and secure.

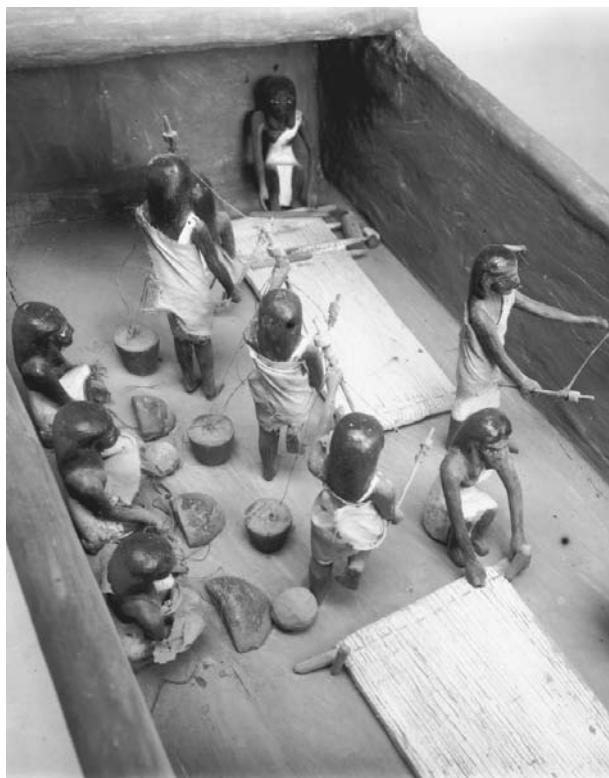
Shed bar: Rod or stick on a primitive loom that is used to separate one set of lengthwise (warp) yarns from another set so a space (called the shed) is made that allows the passage of the crosswise (weft) yarns.

Supplementary weft: An extra crosswise yarn, in addition to the primary crosswise yarn.

Warp/warp yarn: Lengthwise yarns in a woven fabric.

Weft/weft yarn: Crosswise yarns in a woven fabric.

Woad: Natural blue dye obtained by fermenting the leaves of the woad plant, *Isatis Tinctoria*.



Egyptian textile workers depicted in funerary model. Though only women are seen here, ancient Egypt differed from other early civilizations in that both men and women wove the favored white linen. THE METROPOLITAN MUSEUM OF ART, PHOTOGRAPH BY EGYPTIAN EXPEDITION. 1919–1920. REPRODUCED BY PERMISSION.

true weave is that the process, unlike twining, can be mechanized with shed bars and heddles. So once the heddle—a conceptually difficult invention—is available, weaving ousts twining thanks to the speed of manufacture.) This corpus includes tied fringes, reinforced selvages (closed edges of a fabric that prevent unraveling), rolled and whipped hems, weft twining and warp-wrapped twining, as well as coarse, fine, tightly- and loosely-woven fabrics.

With the heddle invented and domestic flax available, large-scale weaving began to spread in all directions. In Europe have been found remains of vertical warp-weighted looms in villages around the central Danube by 5500 B.C.E., a tradition reaching the Swiss pile-dwellings by 3000 B.C.E. as it spread west and north. By 5000 B.C.E. crude linen-weaving spread south to Egypt, where someone painted the first known depiction of a loom circa 4200 B.C.E. Weaving with heddles also spread eastward across Eurasia, apparently reaching Tibet and China circa 5000 B.C.E.

Inhabitants of the western hemisphere probably invented twined fabrics on their own (unless, like string, this technology entered with them); the earliest finds date

to about 8000 B.C.E. But true weave does not appear until nearly 2000 B.C.E., radiating from an area of north-west South America containing both archaeological and linguistic evidence that some Asiatic foreigners had somehow arrived. That suggests that the heddle was invented only once, in either the northwestern Near East or south-eastern Europe, some time before 7000 B.C.E., and spread worldwide from there.

Despite the subsistence-level economy of the Swiss pile-dwellers and their neighbors, central and western Europe is the one area where there is evidence of decorative patterning in Neolithic textiles: supplementary weft and occasionally warp patterns (both overshoot and brocaded), beading (with seeds), an example of the Log Cabin (color-and-weave) pattern, and what may be embroidery (the originals were lost in one of the wars—only drawings survived). All these textiles were too blackened to show color, but the investigator of the most ornate claimed that it would not have been made that way unless the weaver were juggling at least three colors. A Neolithic site in France produced evidence of dyeing thread yarn with both kermes (red) and woad (blue), both colorfast dyes. Other evidence for patterning comes from clay figurines of women found in the Balkans and Ukraine: Many are naked and some wear string skirts, but others wear simple wraparound skirts with a square or checked pattern.

Up to 4000 B.C.E., the only readily available fibers came from plant stems (bast fibers: flax around the Mediterranean; hemp farther north across Eurasia, including China; yucca, maguey, among others in the western hemisphere). Sheep (*Ovis orientalis*) had been domesticated in the Near East around 8000 B.C.E., but for meat—their coats consisted primarily of bristly kemp, with only a short undercoat of ultra-fine wool (5 microns) for insulation. “Nice” modern wool runs 15 to 30 microns in diameter, but the wild kemp runs about 300 microns and has no torsional strength, so it cannot be twisted into yarn. It appears to have taken 4000 years of inbreeding to develop sheep with usable amounts of wool in their coats (genetic changes gradually eliminated the kemp, while the wool grew longer and heavier). Once woolly sheep were available, however, everyone wanted them and soon they were taken to Europe and the Eurasian grasslands. Unlike bast, moreover, the wool of even a single sheep typically includes several shades of color, which can be sorted for patterning one’s cloth. This helped fuel the explosion of textile technology in the next era.

Bronze Age

It is only as people began experimenting with metals, shortly before 3000 B.C.E., that they seem to have begun using cloth widely, and in particular to differentiate themselves with clothing. Since metals had to be obtained through trade or distant mining expeditions, people began moving around much more, causing new concentrations of wealth and greatly increased movement of ideas.

A tall stone vase from Uruk (the Mesopotamian city in which writing first appeared about this time) shows the key domesticates—grain and sheep—in the bottom registers, with lines of naked workers bringing in the harvest above them, while in the top register we see the fancily dressed elite presenting gifts of food to a fully clothed goddess or priestess. As in the Palaeolithic, clothing developed—as seen here—primarily to send social messages, becoming ever more elaborate in both the Near East and Europe.

Neither textiles nor paintings survive well in the Near East, but cuneiform texts attest to the importance of textiles. We see this particularly in the dowry lists of young women, with their chests of clothing (and numerous hats), in the high prices fetched by some textiles, and also in some women's letters (about 1800 B.C.E.) concerning textile manufacture. In one group, two queens, good friends, discuss their woes in overseeing the palace manufacture (by slave women) of fancy cloth and clothing that their husbands expect to use as important diplomatic gifts. In another set, a group of merchant-class women in Assyria, who were in business for themselves making and selling textiles, discuss and argue with their far-faraway husbands (who sold the textiles abroad) about types of cloth to make, prompt payment, tax-dodging, opportunistic purchases, and problems with the caravan-drivers who transported the goods. Textile manufacture, in fact, was basically women's work in early times, as shown by the representations (which generally show women doing the spinning and weaving) and the location of textile tools in women's graves, not men's. Men, however, often helped with fiber production, felting or fulling, dyeing, and final sale (although much cloth was made for the family itself).

In Egypt, however, many matters differed. Traditionally women spun thread and wove it into cloth, but men also spun, making the string and rope needed in the fields; and mat-weaving was men's work. In the murals, we see children learning to spin beside their mothers in the textile workshops. Men also did the laundry, which had to be done in the Nile where crocodile attacks were a problem. Archaeologists have found linens of all grades, from coarse sailcloth to pieces as fine as silk handkerchiefs (200 threads per inch). Unlike their northern neighbors, the Egyptians wore mostly only white linen, since they preferred to have clean, bleached clothes every day (Egypt is very dusty and linen is wonderfully wash-and-wear, unlike wool); for color they used beads and other jewelry, instead of patterned cloth. Since textiles are preserved far better in Egypt than most other places, people tend to think everyone "back then" wore only white cloth, which is not true.

The glory of Bronze Age weaving designs is most visible in the frescoes of Minoan Crete, where we see women in particular arrayed in sophisticated polychrome patterns, especially running spirals, three- and four-

petaled interlocks, and small all-over patterns closely reminiscent of twill and rosepath designs. The men wore simple loincloths with fancy woven edgings, but the women wore long flounced skirts and tight-fitting short-sleeved bodices and sashes sewn up from these elaborately patterned cloths. For a millennium (c. 2100–1200 B.C.E.), Aegean weavers even exported large, brightly patterned cloths to the Egyptians, who apparently coveted them for making ostentatious canopies. For actual color, some Bronze Age textiles of Central Asia have preserved stunning reds, blues, and yellows.

As the Bronze Age progressed, the Mesopotamians, Minoans, and Egyptians all began importing ornate textiles from Syria, which seems from its texts to have been an important center of the industry. (Textiles themselves do not survive there.) Around 1475 B.C.E., Egypt even imported both tapestry technique and the "tapestry loom" (vertical two-beam loom) from Syria, where both seem to have begun a millennium earlier. By 1200 B.C.E., Egyptians depict Syrian and Aegean captives as wearing extremely ornate clothing characterized by friezes of animals. This tradition of friezed textiles seems to have survived in Greece through the period of destructive attacks that ended the Bronze Age around 1200 B.C.E., resurfacing there about 800 B.C.E., where, in being copied onto Iron Age Geometric and Wild Goat styles of pottery, it jump-started Greek art.

Other Areas

In India, cotton was domesticated before 3000 B.C.E., but it reached the Mediterranean only after 1000 B.C.E. Cotton is easy to dye, and the Bronze Age city-dwellers of the Indus valley apparently exploited this trait, judging by the dye-installations and occasional depictions. In northern China, people discovered silk by 2000 B.C.E., developing its production, dyeing, and weaving into a high art—and a royal monopoly—during the great Shang dynasty (1500–1100 B.C.E.). Unfortunately, little but pseudomorphs has survived from periods before the mid-first millennium B.C.E.

True weaving was well developed in the Andes and in Central America before Europeans arrived. The Andean people had available not only cotton (native to both New and Old Worlds) but also the wool from alpacas, which occurs in a wide variety of shades from white through soft browns to black. Many superbly crafted pieces of tapestry and embroidery have survived, thanks to the cold, dry climate of the high Andes. Mayan and Aztec textiles have seldom survived, although we know from accounts and images that they were sometimes quite ornate. North of the "four-corners" area of the western United States, the heddle was still unknown. The one famous type of ornamented cloth from prehistoric North America, the Chilkat blanket, was laboriously twined onto a hanging but unweighted warp. (The Navajo did not start to weave their colorful blankets until the late nineteenth century.) The feathered garments of the

Hawaiian royalty, too, were made by twining, using the twist of the plant-fiber weft to bind in the brightly colored feathers.

See also **Dyes; Natural; Linen; Loom; Wool.**

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E. J. W. Barber

TEXTILES, SOUTH ASIAN The large geographic region of South Asia consists of many diverse nations, each distinguished by their varied religions, geographic and climatic conditions, peoples, and diverse cultural, economic, and political and social dynamics. The countries that constitute South Asia are: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. (Tibet,

administratively an "autonomous region" of China, is also usually included.)

Throughout recorded history, textiles have played an important role in the social, cultural, and economic life of South Asia. Cotton, as well as many dye plants, is native to the Indian subcontinent, facilitating the development of many textile techniques. Distinctive dress forms evolved from lengths of unstitched cloth. Furthermore, much of this region lies along or occupies great historic sea and land trade routes whereby textile products were disseminated along with great cultural exchange and the spread of Buddhism, Hinduism, and Islam.

Bangladesh

Bangladesh historically occupied an important position linking trade between South and Southeast Asia. Its cottons were traded throughout Asia, Persia, and Africa. Once largely Buddhist and Hindu, beginning in the thirteenth century, the country became predominantly Muslim. Bengal (the region now divided between Bangladesh and India's West Bengal Province) was affected politically and economically by the arrival of the British East India Company in the eighteenth century, which led to increased religious, economic, and political polarization and class conflicts. East Bengal became independent (as East Pakistan) in 1947, and broke away to become the independent state of Bangladesh in 1971.

Bangladesh has long been famous for its high-quality woven cottons, silks, and jute production. Especially famous were the ultra-fine muslins of Dahka (or Dacca). Plain, striped, checked, and figured saris woven of fine muslin threads were often given poetic names to describe their cobweb-like lightness and softness. *Jamdanis* are figured cloths, where small images are woven or inlaid in an embroidery-like weaving technique called discontinuous supplementary weft. Equally famous silk brocade saris have also been woven in present-day Bangladesh.

In rural areas, there were varieties of tribal backstrap weavings formed into clothing. Two-piece clothing worn by women, consisted of the *mekhala*, or saronglike lower-body wrap, and the *riah*, or upper-body breast cloth. Women also wove and wore chaddar, or head cover/shawls. Men wore the dhoti, or loin cloth, a shoulder wrap and occasionally a simple untailored jacket stitched from several pieces of hand-loomed fabric.

The *kantha* is a famous embroidered textile from Bangladesh and Bengal. Made from layers of worn saris and dhotis, these thin blankets were embroidered with figures and scenes of everyday and religious life, then quilted in tiny white stitches. Although *kantha* vary in style and color scheme by region, a characteristic feature is a central lotus medallion.

Pakistan

Pakistan is an ancient land with a fascinating multicultural history. Remains of woven and dyed cottons have been

found among the third millennium B.C.E. Indus Valley settlements located in present-day Punjab and Sind regions.

Many ethnic and tribal groups of Pakistan wear slightly varying garments of vastly different names. There are numerous names for head covers, upper body garments, and lower. From the Sind area, a woman's embroidered headcloth is named *bochini* or *abocchnai*; in Punjab all-over embroidered headcloths in geometric patterns were *phulkari bagh* or *chope*, while the figured embroidered ones were called *sainchi*. Women generally wear three-piece sets consisting of drawstring-waisted *salwar* (sometimes spelled *shalwar*), long over-tunics variously called *kameez*, *pushk*, or *cholo*, and head covers. A long embroidered wedding blouse is called *guj* or *chola*, depending on the region and community. Men formerly wore the kurta, a collarless long-sleeved upper body garment over *salwar* drawstring trousers, or over the *lungi*, a sarong-style lower-body garment. In the twenty-first century, men typically wear Western-style trousers. The *malir*, or *bhet* or *bukhano* (depending on the community) was an important male wedding cloth that could be worn over the shoulder or as a turban. In cooler regions of both India and Pakistan, men wear an outer coat called *choga*.

India

This vast landmass is home to numerous languages, religions, tribal groups, and diverse communities. Cotton is native to India, as are many dye plants including indigo and madder, and the cultures of India have produced exceptional skills and creativity in textile arts. Due to India's religions, social customs, textile skills and products, hereditary castes of crafts workers, and the role of women in producing dowry textiles, the textile arts and diverse forms of Indian dress are distinctive, impressive, numerous, and ancient. Specific forms of dress, employing characteristic textiles, were intricately intertwined with and dictated by factors such as region, urban or rural setting, caste and social station, ceremony or religious activity, and historical time period.

Trade, invasions, and imperialism brought many changes to Indian culture, including textiles and dress. The introduction of Islam beginning in the thirteenth century, and the establishment of the Delhi-based Mughal Empire in the sixteenth century, brought new types of fabric and new garments. Rich dress and splendid outward appearance was preferred, and the Mughals rewarded their administrators and loyal military staff with lavish dress. Simultaneously, in the fifteenth century, Europeans opened sea routes that challenged the long-standing routes of Arab traders who had heretofore monopolized the trade between Asia and Europe. The Portuguese established themselves in south India and made Goa the seat of their power and trade. The Dutch Netherlands East India Company understood the intrinsic aesthetic and symbolic value of Indian textiles and utilized them in exchange for spices with present-day Indonesia. Textiles played an important ritual role in

many of the diverse cultures of the East Indies islands, and so Indian trade textiles (for example, the silk ikat known as patola cloth) were in strong demand there. The British East India Company traded largely between India and England, and eventually established British domination of the subcontinent, exerting power in part through subservient local rulers. *Maharajas* (kings), *maharanis* (queens), and their Islamic counterparts, the *Nawabs*, demanded elaborate courtly dress to declare their elite status. These courts generated large demands for woven silks, gold and silver brocades, embroideries, and jewels. Wealthy merchants and traders also dressed in similar splendid style.

British rule in India, and its economic effects, had a profound impact on Indian-made cotton, textiles and clothing. Homespun thread and yarn was displaced by imported British factory-spun thread, while foreign markets for traditional Indian cotton trade goods, such as muslin and chintz, were also undercut by British manufacturing might and discriminatory trade rules. One tactic of Indian nationalist opposition to British rule in the early twentieth century sought to counter the domination of British mill-woven goods in favor of self-reliance through making and buying Indian *khaddar* (handspun, hand-loomed cottons) and other hand-made goods. Factors intrinsic to local culture also led to the preservation of many textile types and techniques.

In both India and Pakistan, marriages are occasions for the production of ceremonial and decorative textiles and special dress. In northwest India and twenty-first-century eastern Pakistan, textiles and dress are important items in the dowry that a bride brings to her new home. Brides' families prepared decorative textiles such as *torans* (doorway hangings), *chaklas* (decorative squares), *dhraniyo* (quilt covers), and quilts called *rilli* as part of the dowry. New clothing sets were also made, including the garments to be worn for the marriage ceremony.

Early records show that textiles were closely linked with ritual and purity, and early texts describe unisex upper- and lower-body garments of hand-loomed, wrapped cloth, as well as tailored garments. Woven cotton, wool and silk were commonly mentioned for clothing and trade. Ways of dressing by wrapping cloth is seen in ancient sculptures as well. The *dhoti*, or male lower garment, and loin cloth have been tied in similar fashion for thousands of years. In ancient India, the fibers, quality of a fabric, and the ornamentation materials and methods constituted a well-understood visual language to convey the status of the wearer. Garments woven with gold thread were referred to as *zari*, and if particularly heavily woven, they were called *kinkhab*. Tie dyed-garments were referred to as *bandanna* and diagonally tie-dyed clothing was called *laheria* for the specific designs resulting from the process.

Dress in traditional India varied greatly by climate and region, religious group, and community, and also by

fiber, method of construction, and type of imagery or ornamentation. Saris continue to be identified by regions of production and outstanding visual characteristics. An Indian woman can name countless regional weaves and describe the main characteristics of saris by their names, such as Baluchari Buttidar, Varanasi (heavily brocaded weaving, also called *benarasi*; common designs include the mango, moon, vines, and small flowers), Himroo, (brocaded weaves from the central Deccan area), and Patola (double ikat silk woven in Patan, Gujarat; designs consisting of repeated geometric grid-like patterns and striped borders), to name a few.

Forms of dress have evolved dramatically in India to reflect the dynamic social shifts that have occurred, as well as external influences, changing styles and influences of globalization through new styles, materials, economic development and attitudinal changes. Where urban women throughout India once wore the sari, by the 1970s many had adopted the Muslim and Punjabi style of dress consisting of *salwar* and *kameez* worn with a *dupatta*, a long head cover/shawl. In the mid-1980s, a movement called the “ethnic style” reflected a new interest in the aesthetics of rural embroideries, by applying commoditized embroidery elements to the bodice of the *kameez*. Combinations of embroideries from diverse groups with Indian-made fabrics like block print, recycled saris, or hand-loomed fabrics were sometimes styled into dress echoing contemporary Western styles. The dress of men in rural areas changed from wrapped lengths of cloth called the *dhoti*, or *lungbi*, to the wearing of trousers, and from loose upper body garments to more traditional western shirts. Many rural women shifted to wearing synthetic-fiber saris, which were cheaper and easier to care for and had a more contemporary association. By the 1990s, many urban women abandoned wearing saris and *salwar-kameez*, adopting instead casual, Western sportswear and wearing more traditional *salwar-kameez* or saris on special occasions.

Sri Lanka

Sri Lanka, formerly known as Ceylon, is located in the Indian Ocean, southeast of the subcontinent of India. The textile arts of Sri Lanka are very similar to those of southern India. Rulers from the south brought artisans and established handicrafts production around 300 B.C.E. Indigenous weavers made primarily cotton goods, while the higher caste weavers of south Indian origin wove cloths with gold thread.

The indigenous population of the greater part of Sri Lanka is Sinhalese. Historically, Sinhalese women bared their breasts and wore white, or red or white with red-striped cotton lower garments that were draped like a dhoti, pleated and tied with a knot at the waist. When working, women bound their breasts with the *thanapatiya*, or breast bandage. Buddhist monks and nuns wear yellow, brownish, and maroon *kasaya*, or robes.

The Tamils of northeastern and eastern Sri Lanka dress in saris and Western dress, as do the people of Tamil Nadu in India. Sinhalese men are frequently bare-chested and wear checked cotton or synthetic sarongs. On formal occasions, men wear white shirts and European-style jackets. Contemporary women’s dress was greatly influenced by the Dutch as well, with the wearing of Javanese batiks and prints wrapped sarong-style and topped with long-sleeved, low-necked blouses.

Maldives

The Maldives is a chain of small islands lying in the Indian Ocean off the southwestern coast of India. The earliest settlers of these lands immigrated from India and Sri Lanka perhaps more than 2,500 years ago. The Maldivians have long been fishers and traders. Maldivian cowry shells (which were widely used as currency in ancient times), coir fiber from coconuts, and fine cottons attracted trade with Arabs who first introduced the Islamic faith in the twelfth century. In the hot, humid climate of the Maldivian Islands, people traditionally wore bare-breasted but wore lower body wrappers of very fine cotton. Men wore light-colored *lungbis* and women wore the saronglike garment called *feyli*, which was started below the navel and fell to the ankles.

In the seventeenth century, a devoutly Islamic sultan imposed regulations that women cover their breasts and wear *burugaa*, the Dhivehi word for burqa, Hijab, or veil. After several sultans’ rule, the women’s Islamic dress code disappeared and did not reemerge until the mid-1980s. Since this time, many Maldivian women have felt pressure to don the *burugaa*, and the issue of whether or not to wear Middle Eastern-style Islamic dress is hotly contested. On the main island of Malé, men wear Western-style clothing and many women wear dresses topped by shiny synthetic fabric overcoats and head scarves. For festive occasions, modern Maldivian “national dress” for men consists of a white shirt and light-colored check or plaid *lungbi*, and for women, a solid-colored dress trimmed with white accent bands at the skirt bottom.

Nepal

Nepal is a Himalayan kingdom that unites numerous formerly independent principalities. The population is roughly divided into Tibeto-Burmans in the mountainous north, and Indo-Aryans in the southern lowlands; these populations are further divided into numerous ethnic groups, with many different cultures, languages, and religious beliefs. Nepal’s diverse climate and geography also yields diverse fibers ranging from yak hair in the north to sheep’s wool, silk, nettle, hemp fiber, and cotton in the tropical areas. While at one time people produced their own fibers and garments, barter trade with India and Tibet led to new sources of textile materials and ready-made clothes. In the early twenty-first century, hand-loomed fabrics have largely been replaced by ready-made garments and mill-woven goods.

Distinctive textiles of Nepal include *dhaka*, an inlaid tapestry-woven cloth used to make caps, or topis, and *rari*, thick, rain-proof woolen blankets made from several lengths of hand-loomed fabric. Although most traditional Nepalese textiles have been or are in danger of being displaced by manufactured imported fabrics, the demand for hand-loomed *dhaka* fabric, created on jacquard looms, remains high. There is also increasing interest in the hemp fiber clothing.

Tibet

Tibet, the northernmost of the South Asian countries, occupies the northern slopes of the Himalayas and the high Tibetan plateau. Historically, Tibet has been largely isolated from foreign influences, but traded with China (as well as with India, via trans-Himalayan caravan routes). Consequently, numerous aspects of Chinese culture are visible through the silk weaves, images, symbols, and some basic garment forms throughout much of Tibet's textiles and dress. Generally Tibetan people wear long, side-closing robes called *phyu-pa* for the sleeveless type and *chupa* for the long-sleeved robes, long sleeveless vests, jackets, sashes, aprons, and hats, with long fleece coats and high boots in cold weather. Types and qualities of materials were dictated by (and proclaimed) the wearer's status in Tibet's once highly stratified society. Garments are made of brocaded silk, wool, cotton and fleeced-lined hide.

Pastoralists of both genders wear leather robes, with the fleece side against the skin. In hot weather, men pull the robes back over one or both shoulders and tie the sleeves at the waist. Sewn by men, these hide garments are called *lokbar*. Women's *lokbar* are frequently trimmed with colored cloth bands at hem and cuffs. Buddhist personnel wear garments with distinctive details to indicate hierarchy and roles. The shape of the hat distinguishes monastic orders. The Buddhist monk's common garment is called *kasaya*. The inner *kasaya* is yellow and the outer one is deep red/maroon. Worn in pairs, the large rectangular *kasaya* are topped with a cloak in the winter. High-ranking lamas wear yellow silk, often lotus flower-brocaded robes, embroidered vests, tall brocade boots, and golden hats appropriate to their station when traveling. Religious festivals, performances and ceremonies call for special dress, masks, and headgear.

Among the most distinctive Tibetan fabrics are those used in women's aprons, called *bangdian*, which consist of three or four parts stitched together. Rectangular and trapezoidal, these aprons are usually made of hand-woven cotton with contrasting color stripes.

Due to increased Chinese immigration into Tibet and sweeping social changes, the ancient hierarchical rules that once dictated rigid Tibetan forms of dress have disappeared. Globalization in the form of more readily available Chinese garments and mill-woven and brightly printed cottons has led to changes in dress. Frequently,

women in the early 2000s wear printed blouses under their *chuba* or *lokbar*, and urbanites generally prefer more subtle color schemes and streamlined silhouettes. In response to the flood of Chinese goods, many Tibetans are making efforts to not lose their traditional dress and weaving skills.

Bhutan

Bhutan is a Himalayan Buddhist kingdom that historically has been linked through religion to its neighboring countries of India and Tibet and through trade to China. It has been and remains relatively isolated from the rest of the world. The population is diverse, including ethnic groups of Tibetan, Assamese, Burmese, and Nepalese affinities and significant numbers of Tibetan refugees and Nepalese immigrants. The dress of these groups varies, reflecting their distinctive cultural origins.

In Bhutan, textiles are symbolic of wealth. They serve functional and decorative purposes in the home, in religion and ritual, are given as offerings or gifts, and are made for dress. Women weave hand-woven textiles that often have complex striped warps, brocade weaves, and inlaid (or supplementary) weft patterns, while men tailor and embroider. Some of the supplementary weft patterns seen in Bhutanese weavings are similar to motifs also seen in Southeast Asian textiles. The chief fibers are silk, cotton, and wool, with synthetic fibers and colors now readily available. At one time, wealthy families produced their own spun and dyed fibers, but synthetic colors and mass-produced fibers have contributed to more colorful and rapidly changing fashion subtleties.

Although Bhutan is composed of many diverse populations with their own forms of dress, a national dress has been established to visually communicate unity. Bhutanese national dress for women is the *kira*, while the *gho*, or *go*, is the national dress for men. The *kira* is a large, hand-loomed rectangular cloth that is wrapped about the body and held in place with a *kera*, or belt and pins at the shoulders. A *khenja*, blouse, and a slip, are worn under the *kira*, and the dress set is accompanied by a jacket and ceremonial shoulder cloth called *adba*. The blouse cuffs are folded over the jacket cuffs. Patterns and styles abound, each with specific descriptive names. *Gho* (or *go*), the male dress, is similar to the Tibetan *chuba* in that it is a tailored, long-sleeved, asymmetrical closing robe. However, the *gho* has large turned-back contrasting sleeve cuffs and is raised from the ground to just below the knees and held in place with a *kera*. Men wear knee-high socks and a *tego*, or shirt, under the *gho*. The folded-up portion at the waist of the *gho* serves as a multipurpose pouch. On special occasions, over the *gho* men wear a swag-like, ceremonial shoulder cloth called *kumney*. Other garments include three-panel woolen cloaks called *charkab* and *pangkheb*, or carrying cloths. Additionally, many forms of archaic dress survive for use in religious dances and festivals.

See also **Textiles, Southeast Asian Islands; Textiles, Southeast Asian Mainland.**

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TEXTILES, SOUTHEAST ASIAN ISLANDS

The textile traditions of insular Southeast Asia, an area from Sumatra, the westernmost island of Indonesia, to the northernmost region of Luzon in the Philippine Islands, covers an equally wide variety of types, styles, and traditions. These insular people are related by language and customs from former waves of migrations and by methods of textile manufacture as well as design elements and patterns. Trade through the region influenced styles with those in direct contact adapting new techniques of weaving while peoples farthest from these influences retained older traditions the longest. The following essay examines textiles in insular Southeast Asia from the broad perspective, seeking commonalities that link groups and regions together.

Reception of New Forms

Very early on plant products (bark, leaves, and vines) were processed to use as coverings for parts of the body. In the warm tropics minimal covering was necessary; what was worn was mainly to protect certain parts of the body, the genitals and the head. Other pieces of clothing made of plant products were more decorative than functional (capes, caps, shawls, or shoulder cloths) or fabrics are made as furniture (floor mats, wall dividers, hangings, coverings) for ceremonies and festivals. The end use and function dictated the size and shape of the pieces as well as the materials employed. Thus, large woven mats were used as coverings for the ground, as wall partitions, as sleeping surfaces, or to wrap the bodies of the deceased; bark cloth, a more pliable material, served as skirts, breast coverings, headcloths, loincloths, capes, and caps or hoods.

Woven materials existed long before the adoption of loom weaving in the area. An examination of the variety of twining and net making from neighboring peoples in New Guinea reveals older customs that may have existed prior to the adoption of weaving in Southeast Asia. Mats and baskets woven of reeds, vines, and grasses are an ancient craft form in insular Southeast Asia. Functional pieces such as containers and mats were quite light, which made them easily transported. Designs were easily woven into basketry. Complex patterns from mats and baskets of some tribal groups (Iban of Borneo and Kalimantan) were readily transferred to cloth weaving. The technology employed in weaving fine mats from fibers as thin as thread was in use in the Philippines. Such plaiting can withstand folding without breaking the fibers, unlike coarser materials used in mat weaving. Twining using bast fibers may have been an intermediary step between loom weaving and basketry. Here the process of spinning

strands to produce a continuous thread was known, but the loom frame necessary for maintaining tension on the threads to produce a tight weave was yet to be discovered or adopted.

Origins: First Cloth

Cloth from the bark of trees was used to make practical items of clothing such as loincloths or G-strings for men and narrow hip wraps for women. Scarves would have protected the head from sun or rain. To produce bark cloth, the inner layer of certain kinds of trees was removed, then beaten to produce a soft, flexible material that could be worn next to the skin without chafing it. Clothing that was cut and sewn together and pieces that were elaborately decorated were probably reserved for individuals of high status and wealth or for communal ceremonies. Old photographs and early museum pieces stand as records of early examples of bark cloth from Southeast Asian peoples.

In Indonesia some of the finest examples of bark cloth clothing are found among the Toraja (from the highlands of central Sulawesi), where women's blouselike tops with sleeves were decorated with painted designs. The Kayan people of Borneo created vestlike jackets with painted motifs. Rectangular cloths in Bali were painted with stories or calendars of the Balinese year. Decorative bark cloth was used to cover the deceased; square cloths to cover the head. In Palu, North Sulawesi women wore full-tiered skirts. Toraja women wore dark-colored cowl-like hoods to signify widowhood. The T'boli of the Southern Philippines cut and sewed shirts and trousers of bark cloth, shapes that were repeated later on in woven fabric. Examples of bark cloth are preserved in some cultures because they are still a part of certain sacred ceremonies (Bali calendars). However, in most areas bark cloth has been replaced by woven cloth; skills necessary for production have been lost, and this type of fabric has become extinct.

Loom Weaving

While the origin of loom weaving is unknown, it is assumed to have been introduced in ancient times. Its antiquity can be inferred by the fact that some cultures possess legends about weaving. The Bagobo, Mandaya, and Bilaan have origin myths that mention the weaving and dyeing of bast fibers. (In many of these cultures, spirits are invoked to ensure skill and accuracy during the weaving process. Certain weaving implements are considered sacred.) For the Sundanese, in West Java, the introduction of weaving is attributed to the rice goddess, Sang Hyang Dewi Sri. There are Javanese stories of types of *lurik* (a plain-weave cloth) that enable a goddess to fly. Among the Batak, a distinctive cloth used in rituals, the *ulos*, was said to have been the first weaving given to humankind. Possibly early woven pieces were the reserve of the wealthy and worn only for ceremonial purposes or used in rituals. As looms and the technique of weaving

became common, cloth quickly became the fiber of choice as a covering for the body and for use in rituals.

Wearing of Cloth

A common theme about cloth that links insular Southeast Asian cultures (as well as mainland Southeast Asia) is that woven cloth is rarely cut to the shape of the body but rather draped or folded. In the warm, humid climate draping allowed air to circulate around the body. More importantly, the respect for the design on the cloth may have led to this preferred method of dress. A typical rectangular piece about two and a half meters in length with open ends (*kain*) is wrapped around the waist and tucked in or cinched by a belt. Two identical pieces sewn in the middle allow the wearer to start the cloth above the breasts with enough width to cover the ankles (most Indonesian cultures). Among the mountain tribes of Luzon, the width covered the female body from the waist to the knees. The result of this draped fabric was that the intricate designs woven into the cloth were not compromised and were visible over the entire front of the body.

Another style for the lower half of the body is a rectangle sewn at the ends to form a tube (*sarong*), which becomes a skirt, worn by a man or a woman. Other uses for various sizes of cloth are as follows: a long, narrow strip of cloth serving as a loincloth with end flaps in front and back; a breast covering (Bali, Java royalty, Eastern Indonesia); and a decorative sash worn over the shoulders by a man or a woman (Eastern Indonesia, Sumatra, northern Philippines cultures, for example). A rectangle tied at the shoulders serves as a baby carrier or sling to carry goods. A square folded in many different ways becomes a hat or head scarf (for example, the Batak fashioned a two-pronged head covering that imitates the horns of the water buffalo). A plain two-meter length serves as a sheet or covering for the shoulders when it is cool. Clothing had no pockets, so woven knapsacks or bags served as containers. In some cultures, layers of cloth draped on the body, one on top of the other, symbolized wealth and position (Central Javanese royalty, Timor cultures). On the practical side, uncut cloth lengths were more easily folded for storage.

Cloth that was cut generally was not woven with the elaborate designs that uncut cloth possessed. This cloth followed the shape of the weave; thus, a sleeveless shirt was made by cutting an opening in the middle of the cloth for the head; the selvages were sewn together leaving only holes for the arms (Gayo of Sumatra, Toraja of Sulawesi, Bagobo, Bilaan and Mandaya of Mindanao). Jackets with sleeves also followed the form of the weave with the sleeves (end pieces of the fabric cut and sewn onto the selvages at the ends (Kauer of Sumatra, Iban of Borneo, Bagobo, Mandaya and Bilaan of Mindanao, and peoples of Northern Luzon). These were usually richly decorated with anthropomorphic or zoomorphic forms and geometric designs. Patterns were created in embroidery, and

with beads, seeds, or shells at the neck and front slit and along the edges of the sleeve; more often the entire front and back was richly embroidered.

Division of Labor

Women were the weavers for home use and in the small cottage industry. Girls from an early age participated in steps of the process, starting with processing the fiber and spinning. Young girls first learned basic weaves; in their late teens they were taught the complex process of weaving patterns using supplementary weft or warp threads and working with fine fibers such as silk. Dyeing was generally a task left for the older women. Some women, usually an older woman, were specialists in certain types of dyes, such as indigo; these women were considered to have special powers over these dyes. In their late teens young women were entrusted with the treasured patterns. In some areas girls wove their own wedding cloths, some of which were given during the nuptial celebration by the bride's family to the groom's family. In Java, *lurik*, a relatively plain cloth worn by participants in ceremonies, is given by the groom's family to the bride's.

Patterns were the reserve of women of the family in some areas (Eastern Sumba), handed down from generation to generation. The patterns were preserved as examples so that each generation could copy them. If there were no more female weavers in the family, the patterns were buried with the last known weaver rather than risk having these revealed to someone outside the line of descent.

Some patterns were the preserve of descent groups, and the patterns worn by the members (women and men) identified them with a particular descent group (Savu Island people). In Rote, patterns identified a person with a particular kingdom. In some areas, such as East Sumba, bright colors and certain patterns were reserved for royalty; the commoners were relegated to one or two colors and little patterning. Generally subdued patterns or plain cloth was worn for daily use; the intricate, highly patterned, and colorful textiles were reserved for ceremonies. In Java, even in the early 2000s, *lurik* was said to ward off bad luck. Participants wore *lurik* in ceremonies after a marriage proposal, for the bathing ritual of a pregnant woman in her seventh month, and for the first hair-cutting of a child. The fact that this fabric has been used by people of all social classes for specific ritual is a good indicator that *lurik* was well established in ritual life of the Javanese long before batik was introduced. For status among the Javanese some batik patterns were reserved for royalty, other patterns for wedding cloth, others associated with the retainers at court, and still others used by commoners.

Types of Looms

The back-strap loom, a conveniently portable weaving mechanism, was the earliest form of loom. To this day, some cultures in areas away from major population centers continue to produce textiles by this means. The most

ancient form of weaving involved a continuous warp with patterns created on the warp threads. Through trade new fibers (silk) and techniques were adopted. Weft patterning replaced warp patterning in coastal areas that were directly in contact with trade from India. The adoption of the frame loom in lowland areas enabled wider and longer fabrics to be woven. Complexity of pattern, however, does not go hand in hand with the larger stationary loom. The simple backstrap loom has produced some of the most complex types of weaves in Southeast Asia—for instance, supplementary weft or warp patterns and long tapestry woven fringes that are part of the men's warrior apron in East Timor.

Types of Fibers

The leaf fibers such as *abaca* (a variety of banana plant), and ramie and hemp, bast or stem fibers, were probably used very early on in twining as well as in the first weaving. The Philippines is noted for its use of these fibers in combination with cotton or silk as warp or weft threads. *Abaca* and hemp are the main fibers for clothing of Mindanao cultural groups. A leaf fiber that developed quite late in the Philippines is *piña* or pineapple fiber. It is unusual in that it is knotted rather than twisted to make thread. Probably more widespread throughout the Philippines and Indonesia, it is now produced solely in Aklan province.

Cotton, however, is the main material used in the production of textiles throughout insular Southeast Asia. It is used in combination with leaf or bast fibers as well as with silk. Cotton plants are easily processed for home consumption, thus making this fiber the egalitarian material. Most village people can produce enough cotton to serve their own cloth-making needs. Thus, the skill in weaving technique rather than the high cost of the materials determines the status of the weaver and wearer. Most mountain groups still produce most cloth from cotton, although now they generally purchase the thread rather than produce it themselves.

Silk, a late arrival, probably from China, became a popular cloth for the wealthy. The ability of silk thread to absorb dyes, producing vibrant colors, was one of its main attractions. As silk production developed in insular Southeast Asia, its use became more widespread. To cut costs and for ease in weaving, silk is mixed with cotton or other plant fibers. The Philippines in particular create a fabric, *sinamay*, that combines *piña* or a hemp warp with a silk or fine *abaca* weft for a type of men's shirt, the *barong Tagalog*.

Piña, like silk, is time consuming to process and was used in special garments for the wealthy. *Piña* fiber clothing imitated the Spanish-style dress. Wealthy Spanish, mestizos, and Philippine women wore blouses (*camisa*) and kerchiefs (*pañuelos*) over Spanish-style collars with long voluminous silk skirts; the men wore long-sleeved shirts over trousers. *Piña* fiber clothing and cloths were

heavily embroidered with patterns borrowed from Spanish motifs—flowers, vine, or religious symbols—along with some native plants. Its popularity went beyond the Philippines. Finely embroidered handkerchiefs and collars were imported to Spain and the United States in the late nineteenth century. Many fine examples of pieces of clothing exist in collections but only a few sacred cloths used as vestments or altar cloths exist.

Production Techniques

A division can be made between those cultures that continued to produce warp-patterned weaving (a more ancient tradition) and those that switched to weft-patterned weaving. Silk is generally associated with weft-patterned weaving and is a fabric most often found in lowland cultures (Bali, Java, Sunda, Mindanao) that were associating with traders from India and China. Sumptuous supplementary weft patterns in gold thread were added to the silk cloth and were worn by high-status persons at weddings or other ritual occasions. In the Lampung area metallic thread and mirrors were embroidered on plain cottons to produce a luxurious cloth. Wealth was woven into cloth as it was received in trade. In Java and Bali gold leaf or paint was applied to plain fabric or batik designs to create a sumptuous-looking cloth, which was especially effective in a performance context. Theater was a means of attracting and ensuring the support of the masses, and the glitter of metallic threads and mirrors on cloth was a visible means of marking the status of the elite and creating a sense of pageantry for these emerging polities.

In inland cultures, which were less affected by trade, cloth was more closely linked to cohesion of the group. Designs and colors were the reserve of the high-status person in the village, but to some extent the distinctions between commoner and high status was less than it was in the large-scale societies of Java, Bali, and lowland Philippines. Status was linked to skills, such as prowess for the warrior class. Skills in head-hunting were acknowledged by special sashes, designs in weaves, or other articles of clothing worn by the successful hunter (Iban, Mindanao cultural groups, Nusatenggara region). Skull trees figure on Sumba cloths that once were associated with this practice. In Mindanao cloth that was predominantly red in color was symbolic of the success of a headhunter, and the Iban, too, used red for cloth in rituals for head-hunting.

Conclusion

The textile traditions of insular Southeast Asia identify a cultural group by their design, colors, and style. Their beauty has attracted much devotion of research at a time when their function in these cultures is waning. Change is not uniform. Some cultures quickly adopt change (the Achenese now wear a Persian-style tunic and favor gold couched embroidery in plant patterns or Arabic writing for their clothing and religious articles). As in the past when woven cotton cloth replaced bark cloth, so, too, new materials and styles are replacing the traditional

pieces that are so admired. Status that was marked by the use of textiles has been replaced by other objects that are highly valued—a car, a TV, radio, name-brand jeans, and so forth. Instead of a pile of textiles as a gift of exchange in marriage, a Western bed and microwave might be given. One can lament the loss of the former rich tradition of textile weaving, yet its value was woven into its role in the society. As symbols of status and wealth change, its role is reduced. However, for critical communal ceremonies, change occurs more slowly. The ritual cloths of old will emerge from storage chests to ensure that the spirits are remembered and appeased to guarantee good health, a long life, and happiness in birth or marriage, or a peaceful existence in death.

See also **Asia, Southeastern Islands and the Pacific: History of Dress.**

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TEXTILES, SOUTHEAST ASIAN MAINLAND

The textiles of mainland Southeast Asia share much of their production technology, design repertoires, and consumption patterns with other regions of Asia to the north (China) and west (South Asia, India), as well as insular Southeast Asia. The student of mainland Southeast Asian textiles must be as concerned with Indian, Bhutanese, and Northeast Indian textiles, and those of Southwestern and southern China, including Hainan Island and aboriginal Taiwan, as with the more traditional areas of the mainland, included in the current political entities of Vietnam, Laos, Cambodia, Thailand, Burma (Myanmar), and peninsular Malaysia. Exploration of continuities and discontinuities between “traditional” Southeast Asia and the peoples, cultures, and textiles of these “peripheral” regions pays great dividends. The migrations of many Southeast Asian cultures began in southern China, and mainland Southeast Asia’s major religion, Theravada Buddhism, and its textiles came from

South Asia; also, South Asia and China provided royal textiles which became models emulated even in rural Southeast Asia.

The region's "traditional" textiles include tube skirts, shawls, blankets, and other items that have as their probable model weaving on back-tensioned looms with circular warps. These can be elaborated in a variety of ways, using resist tie-dyed warp or weft elements, intricate supplementary weft or warp floats, tapestry weaves, appliqués, embroideries, and other methods. Additionally, Southeast Asian textiles include Buddhist monk's robes, developed by the Buddha to contrast with the uncut textile tradition of South Asia, as well as tailored coats, pants, and robes derived from Chinese forms.

Early Southeast Asian Textiles

While it is often asserted that the preservation and recovery of Southeast Asian textiles is hindered by the region's tropical and semi-tropical climate, recent creative archaeological research has filled in some gaps. Fragments of textiles adhering to bone caused by bronze deposition have been discovered in Ban Chiang (Northeast Thai) sites. Innovative archaeological recovery techniques from burials have shown that asbestos was used to make cloth. Finally, Green's (2000) work on Khmer bas-reliefs used to decorate Angkorean temples shows that these consisted of designs found on Indian block-printed and ikat-motifed cloth also found in Fustat, Egypt. This innovative work shows that earlier eras of textile production and consumption may not be lost.

Historical Southeast Asian Textiles

With European contact one begins to gain a more holistic sense of the complex world of mainland Southeast Asian textiles. Unfortunately, most early information is concerned with textile display and consumption within the worlds of Southeast Asian monarchies. Louis XIV's French ambassadors' discussions of their 1685 reception at Ayutthaya (then capital of Siam) show that the extensive use of textiles reflected their reception's significance, as well as designated the ranks of the various people involved in these ceremonies. Many of the textiles sent in return by King Narai were noted as coming from Persia, Hindustan, Japan, and China. This evidenced the cosmopolitan connections of Southeast Asian kingship. Non-Southeast Asian pieces using block-prints and metallic interweave, quite beautiful and sumptuous, served as markers of god-king status and as gifts to subjects to secure their status, roles, and allegiances to the monarchy. The goal of European adventurers and trading companies was to imitate and insert themselves into this lucrative, royally controlled South Asian trade as part of their monopolistic takeover of world trading patterns.

However, because of the rigors of Southeast Asian environments, cloth's intensive uses, and the difficulties of production before industrial manufacture, little is known of nonelite textiles prior to the mid-1800s. It is

assumed that local production of silk and cotton yarn and trade in this yarn and textiles was a part of local life. Early European explorers venturing into mainland, especially upland, northern Southeast Asia were impressed with the amount of trade with southwestern China in cotton and silk yarn: cotton was traded north, silk came south. Additionally, explorers visiting the royal families of the northern principalities were impressed by the use of Chinese textiles in the repertory, partially to replace textiles traded or granted by kings to the south.

Members of the Mekong expedition of 1866–1868 were awed by the willingness of local women to trade homemade textiles for European goods. Finally, in addition to having use as clothing, textiles acted as currency. Careful studies of tax receipts flowing into Bangkok from upcountry dependencies during the early reigns of the Chakri dynasty (1782–c. 1830) show that white cotton cloth was a major tribute item. In part, this cloth was requisitioned for royal funerals; in many Southeast Asian cultures, white cloth is required for wrapping the deceased. For royal funerals, even more was needed to dignify the cremation bier and for participant dress (Lefferts, 1994). Some upland Lao cultures use magnificent lengths of tie-dyed weft silk cloth to adorn coffins.

Rural production of Southeast Asian textiles takes place at the household level. It is women's work; women are responsible for growing cotton, raising mulberry trees and silkworms, controlling the production technology, weaving, and, finally, distributing the cloth. However, as the evidence of cloth for tribute indicates, this does not mean that women could engage in this production without elite interference. Bowie has documented that, under rigorous royal control, severe constraints could be placed on local production. In the late nineteenth and early twentieth centuries, it was quite common for northern Thai villagers to wear rags and patched clothing. However, in many other locations, elite control of textile production was probably less severe, laying the foundation for the florescence of wondrously woven textiles that came to light in the late twentieth century.

Twentieth-Century Textiles

Industrially produced textiles, initially from the looms of England and France, but, later production, from pre-World War II Shanghai, South Asian, and American factories, coupled with the intrusion of European tailored clothes, wrought major changes in rural Southeast Asian textile production and urban and rural consumption.

Domestic production of white cloth declined dramatically. Rather than remaining a major consumer of a woman's production, white cloth became a residual meant for donation and personal use. In addition to funerals, a major use was in monk's robes. Cheap, factory-made white cloth, smooth (in contrast with rough home-spun and home-woven pieces), cut, sewn, and dyed the appropriate saffron color, seems to have quickly re-

placed much of the demand for white cloth produced by rural women. At the same time, white cloth tribute ceased, replaced by government levies for cash to run expanding bureaucracies. Finally, the first chemical indigo dyes produced in Euro-American factories, rapidly followed by the development of other artificial colors, replaced locally produced natural dyes. Brilliant chemical dyes proved a boon to Southeast Asian weavers and consumers who wanted sharp colors that contrasted with the dull dyes they had endured for generations.

While there is no secure data, it seems that the period leading up to and through World War II and the following one to two decades resulted in the production of an extraordinary range of indigenous village textiles of complicated designs and patterns, a creative explosion by many accomplished women. These textiles, many used but even more saved for future use, flooded the textile markets of Southeast Asia following the end of the cold war and the opening of transportation and consumption across the whole broad sweep of northern mainland Southeast Asia and southern China. It is fair to say that these textiles represented a culmination of Southeast Asian women's artistic and technological prowess. This was especially the case in the cloth women wove for their own garments, both skirts and sashes. Beautiful tie-dyed patterns dominated in some areas, while in others complicated brocades produced by a loom with a multistrand vertical pattern heddle became common. Finally, in some areas, complicated tapestry weaves and double-warp cloth with supplementary weft became standard.

Euro-American and Japanese connoisseurs became aware of Southeast Asian textiles through the dispersal of Southeast Asian refugees fleeing the American-Indochinese War. These groups included highlanders, some of whom, such as the Hmong (Miao, Meo), were relatively recent migrants into Southeast Asia from China; others, such as the Thai Dam and Thai Khaaw (Black and White Thai) and ethnic Lao of Laos, had been wet-rice cultivators resident in their areas for several generations. All were displaced by war and arrived in refugee camps and countries of final settlement with their traditions, homemade textiles, and demands to reinstitute their culture. The evolution of indigenously produced textiles into articles of consumption by neighbors becoming aware of these refugees, such as the "story quilts" of the Hmong and other changes to their design repertory, has been documented by Cohen. Other weaving traditions, such as that of Lao women in the U.S. and France, have also survived. Several mainland Southeast Asian textile producers have been awarded personal recognition, as, for instance, through the U.S. National Endowment for the Arts National Heritage Fellowship program.

Mainland Southeast Asian Textiles Production

Detailed studies of the production technologies of mainland Southeast Asian textiles are now bearing fruit. The

relation between the woman producer and her material and equipment is a more holistic one than for the typical Euro-American loom. Usually, the loom itself and much of its equipment is made by a man and gifted to the woman as a mark of respect or an inducement to undertake production, considering that textiles are one of the important ways by which a household may gain supplementary income and prestige.

Among some populations, cloth production is magically potent; men are forbidden from touching the loom. A weaver may be viewed as producing a changeable substance, resulting in something of a different quality from that with which she began. Thus, textile production may metaphorically represent a girl's maturation to womanly status, with the ability to bring new humans into the world.

In mainland as well as insular Southeast Asia, the means of textile production as well as knowledge of its technology is controlled by women. Women in many Southeast Asian cultures derive symbolic and cultural capital from their control of weaving and the disposition of production.

Women's textile production may make substantial contributions to household income. While textile production may vary through the year depending on the requirements and opportunities of other employment, textile production used to be, and, for many women remains, an important skill. At minimum, women can produce cloth for which the household would have to spend precious cash. Most weaving takes place using long warps containing several pieces to be cut off as needed. The weaver can give pieces to various individuals, keep others for future giving, or sell some or all of them as opportunities appear. The opportunity cost of time, coupled with the defrayed expenditures for purchasing textiles and the possibility of income production, thus may make a woman's weaving an essential part of household survival.

Modern Southeast Asian Textiles

The global reach of market forces into upland mainland Southeast Asia in the early 1990s resulted in the export of massive numbers of technologically important and aesthetically beautiful indigenous textiles. Most of these left the region without proper provenance or notes as to the uses to which they could be put. Moreover, this export robbed future weavers of pattern cloths of models for future designs and techniques.

However, even as commercialization and globalization have conspired to obliterate the indigenous, home-based production of mainland Southeast Asian textiles, countervailing forces have arisen to preserve and record it. Research by Western weavers and by scholars in mainland Southeast Asian textiles is relatively recent, beginning in earnest in the late 1980s. This effort has resulted in detailed studies of textile contexts, meanings, and uses. Importantly, accomplished foreign weavers have become

interested in detailed studies of the intricacies of mainland Southeast Asian production technology. Because textile production is a process, these studies must include numerous still photographs or, even better, detailed, focused video. Fortunately, this work is underway and important studies are now appearing.

Finally, efforts are underway to conserve some of these traditions. Her Majesty, Queen Sirikit of Thailand, through her royally sponsored Support Foundation (the French acronym for Foundation for the Promotion of Supplementary Occupations and Related Techniques), has, for many years, supported local craftspeople who are expert in modes of production and design. For her pioneering and continuing efforts, Queen Sirikit won an ATA (Aid to Artisans) 2004 Award for Preservation of Craft. In Laos, the Lao Women's Union and private entrepreneur Carol Cassidy are engaged in preserving and expanding the repertoire of Lao weaving and bringing it international recognition. Similarly, in the early 1990s in devastated Cambodia, UNESCO began a massive effort not only to reestablish textile production, but also to reinstitute the cultivation of mulberry trees and silk yarn production to support it. In the early 2000s, some of the glory of Khmer silk weaving is returning. All of these efforts depend on working with local people, usually women, who remember what they accomplished so easily many years earlier, letting them know that their knowledge is of value and encouraging them to share it with others. Most of all, these and other efforts return income to villagers who have begun to see themselves as only poor and without meaningful resources.

See also **Textiles, South Asian**; **Textiles, Southeast Asian Islands**.

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Leedom Lefferts

TEXTILES AND INTERNATIONAL TRADE

Wars have been fought, ships sunk, and broader trade wars initiated over trade in textiles. No other industry comes close to matching the significant role the textile sector has held in the history of trade. Inventories of early sailing ships listed textiles as a vital part of the cargo. Critical to the economic development of country after country, the textile industry has provided both products and jobs needed by humans around the world. In the early 2000s, almost every country in the world produces textile goods, resulting in highly competitive global market conditions.

Historical Perspective

In the late 1600s, British capitalists, inspired by fine cotton fabrics from India, sought ways to produce domestic goods beyond the existing household industry. Thus, England banned Indian fabrics and developed mechanized means of weaving and spinning, launching the Industrial Revolution. Having led the way in changing how goods could be produced, the textile industry provided the groundwork for the transformation of the Western world into a true international economy.

Developments in the United States

British authorities tried to block the development of a textile industry in the colonies by refusing to share new technology and prohibiting trade with other nations. However, soon after America achieved independence, Eli Whitney's cotton gin and Samuel Slater's inventions transformed the budding industry. In years that followed, the sector led the way in many major industrial and social developments, including the emergence of factories, mill towns, employment of women outside the home, and early industrial reform. Later, it became a leader in international trade and trade problems.

Ironically, as soon as the industry began to develop in the states, they applied restrictive measures on imports, similar to the British restrictions they despised. By the late 1700s, Congress imposed tariffs and embargoes on foreign cotton to protect American cotton production. These early barriers on textile imports were a hint of later trade policies for the sector.

Global Textile Industry

Following industrialization of the textile sector in Europe and the United States, the industry also began to spread to Asia and other parts of the less-developed world. In country after country, the textile and apparel industries became the first sector for nations as each moved beyond an agrarian society. The nineteenth century was a period of tremendous growth for the U.S. cotton industry, emerging as the country's leading manufacturing industry prior to the Civil War. New England textile mills developed and prospered. Trade in general among nations expanded greatly, and a sense of international economic interdependence developed. Expansion in the twentieth century bridged the gaps between continents, creating the global textile and apparel markets that exist in the twenty-first century.

The Complexities of Textile Trade

In virtually every developing nation, the textile/apparel industry has been the springboard for economic development, relying on textile and apparel exports to gain much-needed income. Consequently, intense competition grew, as most countries produced textile and apparel goods for the same markets in more affluent countries. In both the United States and Western Europe, the combined textile/apparel/fiber industries were the top manufacturing employers and vital contributors to the economy in every case. Worried about loss of home markets to imports, domestic producers pressured their governments to enact measures to restrict textile and apparel imports. Political leaders could hardly afford to ignore this pressure because these large industries represented large, powerful voting blocs. As a result, complex trade policies emerged at both the international and national levels to manage textile trade.

A trade-policy dilemma. Applying restrictions on textile imports from other countries was a sensitive matter for the U.S. government, because this country had been one of the leaders in bringing countries together in 1947 to form the General Agreement on Tariffs and Trade (GATT). Of significance, the purpose of GATT was *to reduce and eliminate* restrictive barriers on trade from other countries. Restrictions on textile imports would seriously violate this principle.

With pressure from the United States and Europe, a multilateral system emerged that provided the protection the industry sought. Trade policies for textiles and apparel from the early 1960s on were no longer subject



Chinese worker operating a rotor spinning machine. The textile sector in Asia began to develop shortly after textile industrialization in Europe and the United States. © CLARO CORTES IV/REUTERS/CORBIS. REPRODUCED BY PERMISSION.

to the general rules of GATT that governed trade for all other sectors. Instead, the textile/apparel trade had its own set of rules that violated many of the basic aims of GATT by allowing restrictions on textile and apparel imports and by permitting discrimination among trading partners.

In the 1960s, policies limited cotton imports. As manufactured fibers emerged, new rules were needed to cover those. Under the resulting 1974 Multifiber Arrangement (MFA), trading partners negotiated agreements that set quota limits on the volume of textile and apparel products allowed into the more-developed countries. Always a controversial measure, less-developed nations felt the MFA quota system stifled exports in one of their leading sectors. In contrast, domestic producers in more-developed countries considered the MFA inadequate in stemming the tide of imports, while retailers and importers in those nations felt it limited their global buying. Additionally, scholars and economists considered the MFA an outrageous violation of GATT principles.

A New Era

Developing nations had long protested the barriers on their textile and apparel goods and succeeded in bringing an end to the quota system. As part of the GATT-sponsored Uruguay Round of trade talks, GATT became the World Trade Organization (WTO), and the MFA was replaced by the Agreement on Textiles and Clothing (ATC). The ATC was basically a ten-year phase-out plan that eliminated the quota system in three stages. At the end of the ten years, quotas were removed on textile and apparel products, and tariffs were reduced. On 1 January 2005, all products in this sector came under the general WTO rules for all trade and no longer received the special protection in place for forty years.

A new global trade era emerged for the sector, and major shifts in production sites are expected to occur. Developing countries, whose economic future is tied to this sector, will undoubtedly expand exports; however, some will suffer from competition from major players such as China—no longer having the guaranteed market access that quotas provided. More developed countries are likely to see a continuing shift of textile and apparel production going to low-wage countries. Retailers have free rein to shop global markets. And, finally, consumers reap benefits from the intense global competition that provides variety and competitive prices for textile and apparel goods.

See also **Garments, International Trade in.**

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Kitty G. Dickerson

TEXTILE WORKERS Prior to the mid-eighteenth century, textile products were a main household manufacture, both for domestic use and on a commercial basis. Spun yarn, woven cloth, knitted stockings, and lace were the main products (Abbott 1910). Cotton, wool, flax, and hemp were the raw materials used by the women and girls in the household to make products to meet family needs; commercial weaving was often done at home by men.

Transition from the household to the shop system was slow, occurring at different times in different countries and regions. Tryon (1917) describes an “itinerant-supplementary stage” that preceded the shop system. During this stage, an itinerant worker (for example, a

weaver), could be hired to help complete the weaving process in the home. Supplementary businesses provided operations that were too difficult to do in the home. These included operations executed on the raw materials or semifinished products of the household, such as fulling, carding, dyeing, and bleaching.

During the latter part of the eighteenth century, spinning and weaving began to be mechanized, beginning in England, and “manufactories” began to take the place of household production. Mechanical spinning was much more efficient than spinning with a spinning wheel, and so factory production quickly predominated. Weaving still was often done at home, with materials being furnished by a factor or agent and the finished products returned to the manufactory. Workers were paid for each piece they had completed.

Employment and Wage Work

In the United States, mechanized spinning quickly caught on in New England, which had excellent sources of waterpower for the purpose. Power looms for weaving were introduced in 1814 in Waltham, Massachusetts. This was the first factory in America to integrate spinning and weaving under one roof. The displacement of household manufacture brought women and children into the factory to execute tasks they had always done at home, but with different equipment and on a much larger scale.

By 1850, there were 59,136 female “hands” employed in cotton manufactures and 33,150 males throughout the country, with the largest number of females employed in Massachusetts (19,437). Employment in woolen manufacturing was dominated by male “hands,” with 22,678 men to 16,574 females. Average wages in both sectors were higher for men than for women in all states reporting (DeBow, 1854). According to Hooks, “by 1870, 104,080 women textile operatives and laborers were recorded in the census” (p. 103). During the 1900 census year, there were 298,867 men and 292,286 women, 16 years and over, employed in the different textile industries and more than 70,000 children under 16 years, with the largest number in cotton and silk manufactures (Twelfth Census, p. 12).

Effect of Relocation on Workers

The textile industry began relocation from the North to the South after the Civil War. The move was to take advantage of a large pool of low-cost and unorganized labor. The ethnic composition of the labor force in the North was primarily native- or foreign-born whites, unskilled and recruited from the farm population. In the South, operatives were recruited mainly from among native-born whites (Bureau of the Census, 1907). In both the North and the South, the employment of blacks in the textile industry was negligible until the 1960s and the passage of the Civil Rights Act of 1964 (Minchin, 1999; Rowan, 1970).

By 1950, the total number of males employed in the textile industry (708,000) outnumbered the females (523,000). Data for 1983 shows that 49.3 percent of 742,000 workers were women, 21.3 percent were black, and 4.4 percent of Hispanic origin. By 1987, 48.1 percent of 713,000 workers were female, with 24.8 percent black and 6.6 percent of Hispanic origin (United States Department of Labor, 1988). By 2002, of the 429,000 textile workers, there were 326,000 males (76%), 88,000 blacks (20.5%), and 62,000 Hispanics (14%).

Globalization and Free Trade Practices

While the number of textile employees declined between 1950 and 2002, the percentage of women and blacks also declined, while the percentage of Hispanics increased. The overall decrease in the number of workers has been accompanied by a decline in the American production of textiles in the post-World War II period, due to foreign competition and an influx of imports, particularly from Asian countries. Textile production and employment in the countries of Western Europe has seen similar declines.

Textile production and distribution is no longer a process of a single nation, but of a world economy. Increased foreign competition and trade exist among many textile-producing nations. To increase production and to remain competitive, textile manufacturers have invested in new machinery and techniques of production that increase the productivity of labor. This means that fewer workers are needed to "tend" to a larger number of machines. Corporations have merged, joint ventures with foreign companies have occurred, new plants have been constructed in foreign countries, and American-owned companies have increasingly shifted operations to offshore manufacturing. All of this means fewer jobs domestically, but increased employment abroad. This process is a continuation of the shift of textile jobs from high-wage to low-wage environments that was seen already in the movement of textile production from New England to the American South in the middle decades of the twentieth century.

Textile production has shifted to a number of developing countries, including China, India, Pakistan, Bulgaria, and Turkey. Because women are lower cost employees worldwide than men, textile manufacturers in these countries typically employ more than 50 percent females in textile production. Some Asian countries, including Japan and Korea, that once offered low-wage employment in the textile industry, have also seen a flight of textile production to countries with even lower wages overseas. In 2004 leading low-wage countries include Sri Lanka, Indonesia, and Bangladesh (Industrial United Nations Development Organization, 2003).

Although textile manufacturers argue that free-trade practices (such as the abandonment of trade quotas to restrain imports into the United States from China and the North American Free Trade Agreement) have been the cause of mill bankruptcies and closings and job losses in

the United States (Nesbitt, 2003), many economists point out that tariffs, quotas, and other protectionist measures are generally ineffective in maintaining employment in declining industries, and result in higher prices for consumers. Only factories offering some specific comparative advantage (for example, techno-textile production, on-demand specialty textile production, extremely high labor productivity) are likely to survive in high-wage environments in the era of globalization. The portability of the textile industry (whole factories can be dismantled in one country and reassembled in another, lower-wage one) and the relatively unskilled nature of textile work means that production of basic textiles will continue to flow to low-wage environments. An important contemporary challenge is to protect textile workers (largely female, poor, young, and vulnerable) from exploitation, industrial hazards, and other negative effects of employment in an industry that has seldom seen worker protection as a high priority.

See also **Cotton; Dyeing; Fulling; Hemp; Lace; Wool; Yarns.**

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THEATRICAL COSTUME Western theater tradition has its foundations in the Greek celebrations performed in the sixth century B.C.E., honoring Dionysus, the god of wine and revelry. The revels (dances, songs, and choral responses) evolved into spoken drama in 535 B.C.E., when the playwright Thespis introduced an actor to respond to the chorus leader. The result was dialogue.

Another playwright, Aeschylus (525–456 B.C.E.), is credited with establishing what became the traditional costume for Greek tragedy. It consisted of a long, sleeved, patterned tunic, a stylized mask for instant character recognition, and a pair of high-soled shoes called *corthu-nae*. All of these garments were exclusively for theatrical use. One cannot act the hero in everyday wear.

Actors in Greek comedies also wore masks to indicate which characters they portrayed. Additionally, they would often add exaggerated body parts, padded bottoms or stomachs, and oversize phalluses to heighten the comic effect. Short tunics, much like those worn by ordinary citizens, were thought appropriate to comedy.

Although the Romans added their own twists, the costume conventions established by the Greeks essentially remained the same until the fall of the Roman Empire, when Western theater virtually disappeared for eight hundred years.

The Middle Ages and the Renaissance

When theater re-emerged, it did so, ironically, in the context of the church. The Christian church was the sworn enemy of the drama (perceiving it to be both immodest and akin to devil-worshipping). But, since services were performed in Latin, which fewer and fewer parishioners could understand, priests had to devise a way to dramatize the liturgy.

From the fifth century C.E. forward, mystery plays, dramatizing events in the scriptures, and miracle plays,

which depicted the lives of the saints, were increasingly performed both inside the church and on church grounds. As they became more elaborate, they moved into the market square.

Costumes worn in the early religious dramas were ecclesiastical garments. As the scripts became more secular, often involving townspeople in addition to the clergy, lay performers assumed responsibility for any costume pieces not owned by the church. Contemporary religious art provided inspiration for such characters as Daniel, Herod, the Virgin Mary, and assorted devils.

It was during the Renaissance that production elements, both scenery and costume, came to be even more important than the text. Throughout Europe, the nobility staged lavish court masques and pageants to entertain their guests. Costumes depicted gods, animals, and mythological creatures, as well as such emotions as hope and joy. Designers for these festivities included Leonardo da Vinci and Inigo Jones.

The Commedia Dell’arte

Commedia dell’arte, a form of popular street comedy, emerged in Italy during the sixteenth century. Groups of itinerant actors presented largely improvised plays throughout Italy and Europe.

Like the Greek comedies (to which commedia is thought to be linked), commedia actors portrayed stock characters identifiable by their masks and by their traditional costumes. Pantaloon, the archetypal doddering old man, was often dressed in the wide trousers that now bear his name. The wily servant Brighella had a coat of horizontal green stripes, the forerunner of nineteenth-century British livery. Other comic characters include Arlecchino, or Harlequin, Il Dottore, a pedantic academic always dressed in black, and Il Capitano, a cowardly Spaniard. The serious characters in commedia, two pair of lovers and a servant girl, wore contemporary clothing.

The works of William Shakespeare, Jean-Baptiste Moliere, and Jean-Antoine Watteau all show evidence of the influence of this important popular art form.

The Sixteenth through the Eighteenth Century

Costumes for Shakespeare’s plays were a mixture of various periods that audiences accepted as the standard convention. Most parts were performed in contemporary dress either owned by the actor (all were men) or provided by the theater’s patron. On occasion, a helmet or breastplate might indicate a soldier. Fairies and nymphs might wear classical draperies.

The same principle applies to costume in the seventeenth and eighteenth centuries. Most actors and especially actresses dressed as fashionably as possible. A turban indicated an Eastern character. A plumed helmet signified a soldier. Performers provided their own wardrobe with the exception of specialty items provided by the theater.

The Nineteenth and Early Twentieth Centuries

The period between the 1770s and the 1870s saw a drive toward historical accuracy in costume design. As travel became relatively easier, reports, both written and visual, increased people's knowledge of other cultures. International exhibitions such as the Crystal Palace Exhibition in London in 1851 brought the material culture of exotic places to the public. They wanted what they saw and read about to be reflected on the stage.

In the German principality of Saxe-Meiningen, Duke George II established his own theatrical troupe called the Meiningers. The Duke used every available resource to create authentic costumes for his actors.

The Meiningers toured the continent widely, and the style of their productions greatly influenced such bastions of nineteenth century realism as the Théâtre Libre in Paris, and the Moscow Art Theater in Russia. In the United States, the productions of impresario David Belasco reflected his admiration for this new, realistic style.

An inevitable backlash followed. In Russia, to cite just one example, constructivist artists designed highly conceptual costumes whose only relationship to clothing was that they were worn by human beings.

Eventually both styles were recognized as valid, leading to the mixture of historically accurate or concept driven productions that continues in the twenty-first century.

Current Practice

Theatrical costumes are designed to support the script. If realism or historicism is central to the text, the costumes will accurately reflect the clothing appropriate to the period or to the environment. Examples include Henrik Ibsen's *The Master Builder*, which requires clothing of the early 1890s, or David Storey's *The Changing Room*, which calls for uniforms and street wear appropriate for a group of rugby players in the North of England.

Other scripts require a more fanciful approach. Shakespeare's *The Tempest* must be set on an island, but that island can be anywhere in the world. Prospero and Miranda can inhabit any time period agreed upon by the director and the design team.

Costume's Influence on Fashionable Dress

While film costume often influences fashionable clothing, theatrical costume almost never does. A film is seen by millions of people across the country in the first week of its release. By contrast, the average Broadway theater can accommodate only eight thousand people in the same one-week period.

Moreover, there is typically an interval of a year or more between the end of shooting and the film's release. In this interval fashion magazines and other periodicals can run spreads showcasing the costumes, creating customer demand. Historically, film studios, manufacturers, department stores, and dressmaker pattern companies en-

tered into partnerships to promote both the film and the ready-to-wear (or ready-to-sew) garments which the film inspired.

A classic example is the "Letty Lynton" dress worn by Joan Crawford in the 1932 film of the same name. More than 500,000 copies of Adrian's design were reputedly sold at every price point as soon as the film opened. In 1967, Theodora von Runkle's costumes for *Bonnie and Clyde* sparked the trend for 1930s revival styles that were so popular in the late 1960s. Ruth Morley's costumes for Diane Keaton produced *Annie Hall* look-alikes throughout the United States and Europe in the late 1970s.

Another reason why there can be little relationship between theatrical clothing and street wear is scale. A costume is designed to be seen from a distance of thirty or forty feet. Details are exaggerated to make them visible. Film, in contrast, is largely about close-ups. Movie costumes have to be "real" in a way that successful theatrical costumes cannot be.

A few exceptions exist, but they are rare. A red suit designed by Patricia Zipprodt for the 1969 Broadway production of Neil Simon's *Plaza Suite* was subsequently manufactured for Bergdorf Goodman. In 2002, Bloomingdale's introduced a collection of plus-size garments based on William Ivey Long's designs for the musical *Hairspray*.

The audience for a theatrical event is so small relative to the number of people who attend films that it makes little economic sense to use the theater as a design source. Contemporary clothing for the stage may reflect fashionable dress, but it does not influence it.

Special Requirements

Above everything, a theatrical costume is designed for movement. Armholes are cut higher than they are in mass-produced clothing to permit the actor to raise his arms without the whole garment following. Crotches are cut higher to allow for kicks without splitting a seam.

Costumes must be constructed to be strong enough to withstand eight wearings a week for months or even years, with infrequent cleaning or laundering. If the script calls for a "quick change," meaning that the performer makes a complete change of clothing in under a minute, the costume will be constructed to facilitate the change. To change a shirt quickly, for example, the buttons are sewn on top of the buttonholes. The shirt is held closed by snaps or hook and loop tape so that it can literally be ripped off the performer.

Dancers shoes must have soles thin enough to allow the dancer to flex and point her foot. When custom-made, elk skin is the material of choice.

Trends and Developments

Theatrical costumes rely heavily on natural fibers (cotton, linen, silk, and wool). Synthetics do not handle or

drape like natural fibers. That said, however, the development of new materials has had a tremendous effect on the industry.

Before the late 1950s, for example, dancer's tights were made from elasticized cotton, given to sags and bags, or they were knitted and prone to runs. The invention of Lycra, spandex, and other two-way stretch fabrics eliminated such problems. Braided nylon horsehair can be used to make ruffs that simulate the starched linen originals but which hold their shape when laundered.

No firm manufactures textiles exclusively for use in costumes. The market is far too small. Costumers, however, are extremely creative in discovering theatrical uses for products designed for other purposes. Veri-form, a brand name for a type of thermoplastic sheeting, for example, is an open weave, plastic mesh fabric used by orthopedic surgeons for lightweight casts. It makes excellent armor and masks, is nontoxic and easy to work with.

The plastic netting used to ventilate baseball caps makes indestructible and inexpensive crinolines. Air conditioning and other types of foam can be cut and sculpted to form the understructure of lightweight mascot or other costumes that are taller and broader than the actor inside them. Birdseed, encased in a body suit, is excellent to simulate the movement of sagging breasts.

The most significant development in the field in the last twenty years has undoubtedly been a heightened awareness of health and safety issues. As late as the 1970s both designers and costume makers routinely treated fabrics with highly toxic paints, solvents, and glues with no understanding of the risks involved. In the twenty-first century, not only are less toxic products available, but material safety data sheets, respirators, spray booths, and other protective devices are the norm.

While materials continue to evolve, and styles of costume design go in and out of fashion, the principle remains constant. As Robert Edmond Jones wrote in 1941, "A stage costume is a creation of the theater. Its quality is purely theatrical and taken outside the theater it loses its magic at once. It dies as a plant dies when uprooted" (p. 91).

See also **Actors and Actresses, Impact on Fashion; Art and Fashion; Ballet Costume; Theatrical Makeup.**

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Whitney Blausen

THEATRICAL MAKEUP Thousands of years ago, people in many parts of the world discovered that powdered pigments mixed into a base of wax or grease could be used to create striking effects of personal adornment and transformation. The survival of that practice is reflected in a common term for theatrical makeup, "grease-paint." Select types or styles of makeup were often used for special occasions, which could include going to war, celebrating stages of life, and religious festivals. The latter often included performative aspects, such as dance and re-enactments of mythical events. Modern theatrical makeup therefore is heir to a very ancient performance tradition.

Some ancient theatrical traditions have relied on masks for the creation of visual characters; others have relied on makeup for the same purpose. In Asia, for example, one can point to the masked theater of Java and the elaborately made-up Kathakali dance theater of southwestern India, or the masked religious dances of Tibet and the strikingly masklike makeup of the Peking Opera and related theatrical forms in China. In Japan, the Noh drama is masked, while Kabuki drama employs extravagant makeup.

Ancient Greek theater was masked, but later European theater usually used stage makeup to create characters, heighten facial features, and compensate for the effects of stage lighting. (The Italian Commedia del'Arte, which continued to employ masks, was an important exception.) Until well into the twentieth century, performers were expected to do their own makeup, as they were expected to supply their own stage costumes. The professional theatrical makeup artist is a modern phenomenon, as is the theatrical costume designer.

Theatrical makeup is inseparable from the act of performance itself. The aim of theatrical makeup is to delineate and enhance the role of a character and to give performers an additional tool for conveying the characters being performed. Stage makeup is often used to create visual stereotypes or clichés that will be readily understood by the audience. Stage makeup is usually much more colorful and graphic than ordinary cosmetic makeup. When viewed closely, it can seem excessive and exaggerated, but it works when the performer is on stage being seen at a distance by the audience. Theatrical makeup itself is also heavier, more dense, and more strongly colored than ordinary cosmetics, and it is often produced in the form of lipstick-like waxy crayons or pencils. For many performers, the act of putting on makeup is an important part of the ritual of preparing for a performance; it allows the performer to move psychologically into the role of the character as the makeup is being applied.



Kabuki actor paints on theatrical makeup. Many ancient forms of theater, such as Kabuki, use makeup in order to enhance the characterizations of the actors. © ROYALTY-FREE/CORBIS. REPRODUCED BY PERMISSION.

Makeup artists are employed today in a variety of roles, and they often specialize in, for example, theatrical makeup, cinema makeup, fashion photography and runway makeup, or special effects. Regardless of specialty, they typically require years of training and practice to perfect their skills. Special effects makeup is particularly prominent in the world of film, but has also played an important role in the success of many popular Broadway productions, such as *Jekyll and Hyde* and *Beauty and the Beast*. In the film trilogy *The Lord of the Rings*, the prosthetic feet worn by the hobbits were made by a team of special effects makeup artists. Hundreds of pairs were made, as a new pair had to be worn daily by each actor in a hobbit role. In executing such assignments, makeup artists have to draw on skills in sculpture and other plastic arts as well as in the use of cosmetics.

Whether in the dramatic makeup of a horror film or the powerful aesthetic appeal of the unique makeup employed by the Cirque du Soleil, makeup plays an important part in establishing the characterization and impact

of a performed role. Baz Luhrmann's successful films of *Romeo and Juliet* and *Moulin Rouge*, and his stage production of *La Bohème*, owed a significant part of their theatricality and audience appeal to his production team's careful use of makeup techniques that evoked a period style. As these examples indicate, by the early twenty-first century makeup in different theatrical and fashion genres began to cross previously rigid barriers. The world of film, especially in special effects, has had a profound impact on the development of new techniques of stage makeup, and today theatrical makeup shows up regularly on fashion catwalks as well. Recent fashion shows by Dior and Givenchy, for example, have been notable for their strong sense of theater. Fashion makeup artists have begun to borrow liberally from traditional stage makeup techniques to create striking new designs that help to showcase the fashions on display. Meanwhile, theatrical makeup is enriched by new developments in film, fashion photography, and other media.

See also **Makeup Artists**.

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Elizabeth McLafferty

THONGS. See **Sandals; G-string and Thong**.

TIE-DYEING Tie-dyeing is one of the post-weaving physical resist-dyeing techniques using binding and compression to create patterning in textiles. This basic hand process involves binding or tying a raised portion of whole cloth with thread, string, twine, raffia, rubber bands, rope, or other linear materials to "reserve" or protect areas from receiving dye penetration during a vat-immersion or dip-dye process. Although dyeing is considered a "surface" technique, through this method the dyer can create random or controlled patterning and color manipulations that are fully integrated into the fibers of the cloth. According to Jack Lenor Larsen, leading textile authority and designer, "The marriage of thirsty cloth and liquid color produces ornament not on cloth, but *in it*" (p. 9). After dyeing, when the ties or resists are removed, the resulting pattern is created from the original color of the cloth, usually some version of white or light color that was bound off, contrasted with the dyed portions. The entire process may be repeated, and layers of color from over-dyeing or selective topical



GLOSSARY OF TECHNICAL TERMS

Techniques Related to Tie-Dyeing

arashi shibori: Japanese technique in which the cloth is compressed and tightly pleated as it is wrapped around a long pole, tied in place and dyed, giving an irregular, diagonally striped pattern to the fabric. The term *arashi* literally translated means “storm,” as the pattern simulates the linear pattern of rain (Wada, page 34).

clamp resist or “itajime” (board-clamped dyeing): A type of compression resist in which the cloth is folded and tightly clamped using C-clamps between a pair of two identical shapes cut from wood, plexiglas, or other dye-resistant material. The resulting reserved shape is repeated throughout the cloth based on the number of layers folded and clamped together while the surrounding area has received dye.

dip dyeing: Wet cloth is dipped into a series of dye baths containing increasingly darker values of the same or related color or along the edges of a folded bundle of cloth.

fold dyeing: The cloth is folded into small pleats so compactly that it resists the dye and is bound together with string at intervals. A variation includes twisting the folded bundle, further giving an irregular repeat design to the fabric.

knot dyeing: The simplest form of physical resist involves tying the rectangle of cloth on itself in knots in the corners and center before dyeing to produce bold, turbulent patterns.

plaited or braid dyeing: Three strips of fabric are folded lengthwise and plaited together in a threefold braid

and secured by string at the bottom before immersion in a dye bath. After dyeing they are unbraided and machine-stitched together with other braid-dyed strips side by side to form a wider cloth. The resulting pattern is an offset repeat of the exposed areas with a fringe-like edge where the ends were tied off; practiced in West Africa.

tritik: Javanese word for a resist-dye process in which outline patterns are stitched into a double-layered cloth using small running stitches and tightly gathered to prevent substantial penetration of dye. This creates a “mirror image,” or double rows of parallel lines of undyed dots.

Resist Processes Related to Tie-Dyeing

batik: “A resist-dye process in which the resist, usually wax, is applied to the cloth surface; when dyed, patterns are reserved in the colors of the foundation material. Sequences of waxing and dyeing result in multiple color pattern” (Gittinger, p. 240). Other resists include cassava-based paste used in Africa and rice-paste resists used in Japan.

ikat (from Indonesia): “[A] resist-dye process in which patterns are created in the warp or weft by tying off small bundles of yarns with a dye-resistant material prior to weaving. Resists are cut away and/or new ones added for each color. When all are removed the yarns are patterned, ready for weaving” (Gittinger, p. 240). Yarns can also be executed as a “double-ikat” in which both the warp and the weft are resist-dyed prior to weaving. The same technique is called *kasuri* in Japan; in Central America.

spot-dyeing increase the possibilities for complexity of imagery and patterning. Furthermore, the inherent crimped and puckered textures created by the compression contribute to the tactile and aesthetic appeal of the textile.

Origins and Evolution

The origins and evolution of traditional tie-dye methods are based upon the almost universal observation that areas of any foundation material protected from exposure to liquids, gases, heat, sun, or other substances, are left untouched in their original color or state. As a result of this protection or “resistance” to the flow of dye, the potential for controlled mark-making and patterning was discovered and subsequently explored and exploited. Typically the

most basic patterns—circles, dots, squares, and diamond shapes—are repeated in varying sizes and scale.

It is believed that tie-dyeing developed in conjunction with indigo cultivation and has been widely practiced by peoples throughout the world for centuries to decorate their clothing, including in India and Indonesia, Japan, Central Asia, West Africa, Europe, Mesoamerica, and South America, notably in pre-Columbian Peru. It was introduced to Europe in the seventeenth century by cotton calico fabrics that were usually made by resist printing. Silk-printed squares from India used as neck cloths or snuff handkerchiefs, the bandanna, with characteristic dot patterning, is derived from Hindu *bandhnu* (to bind or tie). This technique is also called *plangi* among Malay-Indonesian peoples and *shibori* in Japan. Most re-

cently, tie-dye was revived during the twentieth century as a major part of the 1960s “hippie” aesthetic thought to capture psychedelic phenomenon.

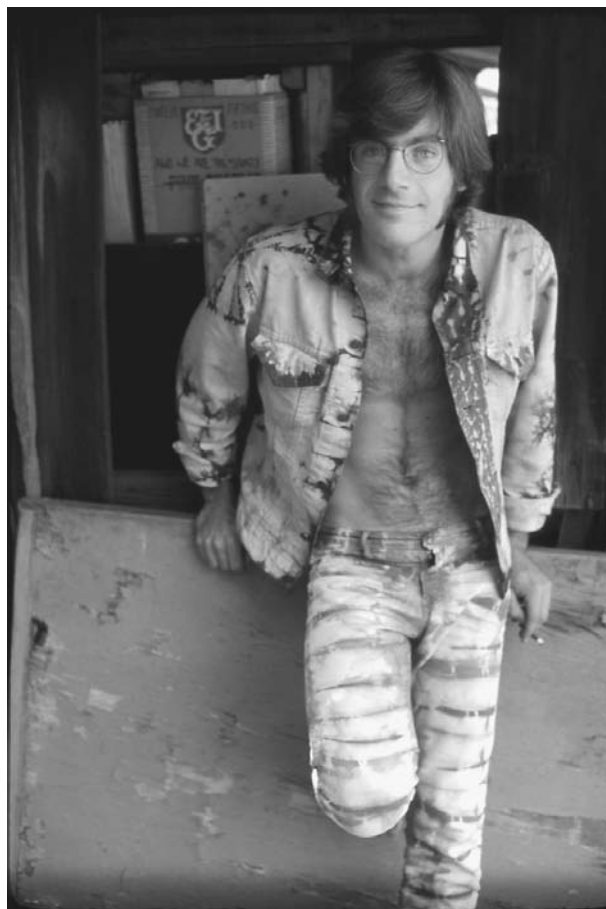
Specific countries and cultural areas have developed highly sophisticated and complex tie-dyeing traditions that are unique to their cultures. Historically, there is evidence of ancient Chinese silks from the ruins of As-tana (418–683), one of a number of towns along the Silk Road, the great trade route that connected East Asia with the centers of western civilization, that used tie-dye methods to create patterned textiles, as well as in ancient Persia and the Middle East. Parts of rural China continue to use tie-dye, as do areas of Japan. Similarly, India developed *plangi*, in which tiny dots of tie-dyed cloth create larger patterns and motifs as well as rich, puckered textures. Rural areas of India still embellish their saris, veils, and turbans for both daily and festive wear using tie-dye patterning.

Japanese *Shibori*

Textile artisans, probably before recorded history in Japan, began to develop an elaborate array of highly controlled techniques for resist-dyed cloth, termed *shibori*, that was associated with particular geographical regions and became the “intellectual property” of specific villages and family groups. Most of the early patterns were based upon drawing up a portion of the cloth with the fingers and binding it around and around with thread before immersing it in the dye. The resulting patterns resemble rings, squares, or “spiderwebs,” called *kumo shibori* (Wada, p. 17). A variation of the tie-dye process, usually known to textile historians by the Indonesian (Javanese) term *tritik*, or stitch-resist, is a technique in which the outline of the design is delineated with stitches and the stitching thread is drawn up, making it possible to protect ground areas from the dye. In Japanese textiles this technique reached its perfection in the sixteenth century. Rural peoples concentrated on indigo-dyed cotton cloth used for kimonos or short jackets, called *hippari*, while silk court robes and obi sashes utilized a vast array of colorful dyes. Traditional imagery was given specific names, such as, *yanagi shibori* (willow) or *mokume shibori* (wood grain), and can be re-created with recently recorded and published methods.

Africa

West and North Africa have specialized in indigo tie-dyed cloth, which was originally introduced through the Jewish dyers and merchants within the Muslim world. The combination of folded and bound resists with the special nature of indigo dye that requires oxidation to produce the blue color allows the textile artist to repeatedly expose the cloth very briefly to the dye bath through dipping instead of, or in addition to, immersed saturation, thereby controlling the degree and depth of penetration. In some cases seeds, pebbles, or other nonabsorbent articles are tied into the cloth to establish a uniform module for the resisted patterning. The folded or stitched areas of these



Musician John Sebastian in a tie-dyed jacket and pants. While the techniques of tie-dyeing date back to as early as the sixth century, tie-dyed clothing gained popularity in the 1960s with the “hippie” generation. PHOTO BY HENRY DILTZ. REPRODUCED BY PERMISSION.

primarily cotton cloths are used to create boldly striped or radiating patterns for robes, shirts, and tunics; large turbulent swirling motifs for *bou-bous* and caftans; or repeated, linear symbolic imagery for wrappers that serve as dresses and skirts. In Nigeria, the term *adire* means, quite literally, “to take, to tie and dye.” Raffia is traditionally used as the binding or stitching material in African work that also includes stitched *tritik* and embroidered resists.

Because tie-dye is based on hand-dyeing that was often practiced as a domestic household industry, the process and its resulting visual qualities fell out of fashion during the mass-industrialization of textile printing during the nineteenth and early twentieth centuries. Rather, the hard-edged block, stencil, silk-screen, and roller-based printing processes were preferred. However, with the revaluing of the individual craftsman as hands-on producer during the 1960s, the characteristically blurred visual qualities produced by dye penetrating fiber regained favor because of the visual spontaneity and rich,

uneven effects. The ubiquitous tie-dyed T-shirt became the symbol of the hippie generation. Since that revolutionary decade, many contemporary textile artist-craftsmen have explored and expanded upon a rich variety of tie-dye methods, resulting in a renaissance of these techniques during the late twentieth century. Foremost among contemporary practitioners is American Ana Lisa Hedstrom of California, whose innovative exploration of *arashi shibori* dyed-silk textiles for wearable art garments, has become trendsetting.

See also **Dyeing; Dyeing, Resist; Hippie Style; Indigo.**

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Jo Ann C. Stabb

TIGHT-LACING The term “tight-lacing” refers to the laces that tighten a corset. There is no generally accepted definition of what constitutes tight-lacing since it could be argued that any corset that is not loose is tight. Furthermore, there is no agreement as to how tightly corsets were usually laced. Some nineteenth-century writers argued that any use of the corset was dangerously unhealthy, whereas others tolerated or praised “moderate” corsetry, reserving their criticism for tight-lacing, however this might be defined. When they mentioned measurements at all, they variously defined tight-lacing as a reduction of the waist by anywhere from three to ten inches. That is, depending on the definition, a natural waist of, say, 27 inches might be reduced to a circumference of anywhere between 24 inches and 17 inches.

John Collet's caricature *Tight Lacing, or Fashion Before Ease* (1770–1775) depicts a fashionable woman clutching a bedpost, while several people tug strenuously at her stay laces. Anyone who has seen the movie *Gone*

with the Wind (1939) can picture Scarlett O'Hara in a similar situation, exclaiming that if she cannot be laced down to 18 inches, she will not be able to fit into any of her dresses.

Published accounts of extreme tight-lacing in Victorian periodicals, such as *The Englishwoman's Domestic Magazine* (EDM), describe young women reducing their waists to sixteen inches or less. For example, a letter signed Nora was published in the EDM in May 1867, claiming to have attended “a fashionable school in London” where “it was the custom for the waists of the pupils to be reduced one inch per month. When I left school . . . my waist measured only thirteen inches.” Another letter signed Walter appeared in November 1867: “I was early sent to school in Austria, where lacing is not considered ridiculous in a gentleman . . . and I objected in a thoroughly English way when the doctor's wife required me to be laced. A sturdy *mädchen* was stoically deaf to my remonstrances, and speedily laced me up tightly . . . The daily lacing tighter and tighter produced inconvenience and absolute pain. In a few months, however, I was . . . anxious . . . to have my corsets laced as tightly as a pair of strong arms could draw them.”

Between 1867 and 1874 EDM printed dozens of letters on tight-lacing, as well as on topics such as flagellation, high heels, and spurs for lady riders. Later in the century, other periodicals, such as *The Family Doctor*, published letters and articles on tight-lacing. The notorious “corset correspondence” has been cited by some writers, such as David Kunzle, as evidence of extreme tight-lacing during the Victorian era.

However, most scholars in the early 2000s believe that these accounts represent fantasies. Indeed, by the end of the century, the tight-lacing literature becomes increasingly pornographic, as fetishist themes overlap with sadomasochistic and transvestite scenarios. Such accounts may well indicate the existence in the later nineteenth century of sexual subcultures where corset fetishists (most of whom were probably men) enacted their fantasies in settings such as specialized brothels, where they paid prostitutes to role-play as sadistic governesses. Yet this is a far cry from the use of corsets in ordinary women's lives.

The popular belief that many Victorian women had 16-inch waists is almost certainly false. Corset advertisements in the second half of the nineteenth century usually give waist measurements of 18 to 30 inches, and larger sizes were also available. Within museum costume collections, it is rare to find a corset measuring less than 20 inches around the waist. Moreover, as the author of *The Dress Reform Problem* (1886) noted, “A distinction should be made between actual and corset measurements, because stays as ordinarily worn, do not meet at the back. Young girls, especially, derive intense satisfaction from proclaiming the diminutive size of their corset. Many purchase 18- and 19-inch stays, who must leave them open two, three, and four inches. 15, 16, and 17 inch waists are

glibly chattered about . . . [yet] we question whether it is a physical possibility for women to reduce their natural waist measure below 17 or 18 inches.”

This is not to say that women did not use corsets to reduce their waists. Writing in 1866, the English author Arnold Cooley claimed that, “The waist of healthy women . . . is found to measure 28 to 29 inches in circumference. Yet most women do not permit themselves to exceed 24 inches round the waist, whilst tens of thousands lace themselves down to 22 inches, and many deluded victims of fashion and vanity to 21 and even to 20 inches.”

The discourse on tight-lacing needs to be analyzed in ways that move beyond simple measurements. Because the practice of tight-lacing was so ill-defined and yet was perceived as being so ubiquitous in the nineteenth century, it became the focus of widespread social anxieties about women.

Tight-lacing disappeared as a social issue with the decline of the corset as a fashionable garment in the early twentieth century. However, there still existed individuals who wore tightly laced corsets. In the mid-twentieth century, Ethel Granger was listed in the *Guinness Book of World Records* for having “the world’s smallest waist,” which measured 13 inches. In the early twenty-first century, the most famous tight-lacer is probably the corsetier Mr. Pearl, who claims to have a 19-inch waist. His friend Cathie J. boasts of having reduced her waist to 15 inches.

See also **Corset; Fetish Fashion.**

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Valerie Steele

TOGA The toga was a wrapped outer garment worn in ancient Rome. Its origin is probably to be found in the *tebenna*, a semicircular mantle worn by the Etruscans, a people who lived on the Italian peninsula in an area close to that occupied by the Romans. Several Roman kings were Etruscan and many elements of Etruscan culture were taken over by the Romans. The toga may have been one of these elements.

The toga was a highly symbolic garment for the Romans. It had numerous forms, but the *toga pura* or *toga virilis* was the most significant. In its earliest form the *toga pura* was a semicircle of white wool.



Statue of Emperor Augustus in a toga. The toga, a garment wrapped around the body and over the shoulder, was worn by all ancient Roman men, though larger and longer togas were generally reserved for Romans with status and wealth. © ARALDO DE LUCA/CORBIS. REPRODUCED BY PERMISSION.

At the time of the Roman Republic (509 B.C.E. to 27 B.C.E.) and after, only free male citizens of Rome who were at least sixteen years of age could wear this toga. It was the symbol of Roman citizenship and was required dress for official activities. Men wore togas to audiences with the Emperor and to the games played in the Roman arena.

The toga was worn outermost, over a tunic. (A tunic was a T-shaped woven garment, similar in form to a

long, modern T-shirt.) The toga wrapped around the body. The straight edge was placed at the center of the body, perpendicular to the floor. The bulk of the fabric was carried over the left shoulder, across the back and under the right arm, after which it was draped across the chest and over the left shoulder.

By the time of the Roman Empire, the earlier half-circle toga had changed its form and had an extended section added to the semicircle at the straight edge. The system of draping remained the same, however the extended section was first folded down. The overfold section fell at the front of the body and formed a pocketlike pouch, called the *sinus*, into which the wearer could place objects such as a scroll of paper. As the toga became still more elaborate and larger, the *sinus* eventually was too open and loose for holding things, so a knot of fabric was pulled up from underneath to form an area called the *umbo*, and this being smaller and more compact became the “pocket” area. The *umbo* may also have helped to hold the toga in place.

Individuals of some significant status wore special togas. Although both men and women had worn togas in early Roman times, by the time of the Republic only men wore togas. However, a vestige of the earlier practice remained. Sons and daughters of Roman citizens wore the *toga praetexta*, a toga with a purple border about two or three inches wide. Boys wore this toga until age fourteen to sixteen when they assumed the *toga pura*, while girls gave up the garment around the age of puberty. Certain priests and magistrates also wore the *toga praetexta*.

Political candidates wore a *toga candida* that was bleached very white. The English word “candidate” derives from the name of this garment.

A *toga picta* was purple with gold embroidery. Victorious generals and others who had been singled out for special honors were awarded the opportunity to wear this toga. A *toga pulla* appears to have been worn for mourning, and was dark or black in color. The *toga trabea* seems to have been worn by religious augurs or important officials.

The toga was an awkward garment. Roman writers speak of the difficulties in keeping the toga properly arranged. Apparently it was acceptable for men to wear longer or shorter togas. A poor man might wear a shorter toga in order to save money, while one seeking to impress others might wear an especially large and long toga. In order to keep this garment clean, it had to be washed often, which caused it to wear out frequently. Replacing a worn toga was an expense that is commented on by some Roman satirists.

By the time of the Roman Republic and after, respectable adult women did not wear togas. Prostitutes were said to wear togas, as were women who had been divorced for adultery. The connotation of a woman wearing a toga implied disapproval.

The form of the toga continued to change. It seems as if men were constantly searching for variations that made the toga easier to keep in place. In one version dating from circa 118–119 C.E. and after, the *umbo* was eliminated by wrapping the section under the right arm at a higher point and twisting that upper section to form a sort of band. This band was called a *balteus*. In the third century it was an easy step from this to “the toga with the folded bands.”

In the toga with the folded bands, the twisted *balteus* became an overfold that was folded and refolded over itself in order to form a flat, layered band of fabric that may have been fastened in place by either pinning or sewing. As the toga wrapped around the body, the bands lay flat, fitting smoothly in a diagonal band across the front of the body.

In the latter years of the Roman Empire, discipline in following prescribed forms of dress grew somewhat lax, and men preferred to wear the *pallium* instead of the toga. The *pallium* itself was an evolved form of a Greek wrapped garment, the *himation*, which draped much the same way as the toga. The *pallium* was a rectangular panel of fabric that, like the toga, ran perpendicular to the floor, around the left shoulder, under the right arm, and across the body, draping over the arm. It was a sort of skeletal form of the toga, retaining its draping but losing its semi-circular form and most of its bulk.

Although the toga in its exact Roman form has not been revived in contemporary fashion, the name “toga” is often loosely applied to fashions that feature one covered and one uncovered shoulder. Examples include the “toga dress” defined by Calasibetta (2003) as an “Asymmetric dress or at-home robe styled with one shoulder bare, the other covered” or the “toga nightgown,” which could be “styled with one shoulder.” Both were styles introduced in the 1960s (Calasibetta 2003).

See also **Ancient World: History of Dress.**

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Phyllis Tortora

TOLEDO, ISABEL AND RUBEN Ruben and Isabel Toledo are a husband-and-wife team who work closely together in several fields of fashion. She is a fashion designer known for producing clothing that combines sophisticated simplicity and meticulous craftsmanship. He is a fashion artist whose distinctive drawings have appeared in many fashion publications and whose work extends to designing mannequins and painting murals for fashionable restaurants; Isabel is his muse and almost invariably his model. He also is responsible for managing the business side of her clothing business. Theirs is a true creative partnership; it is impossible to delineate the boundaries of the contribution of each to the work of the other.

Born in Cuba in 1961, Isabel learned to sew as a child, when she was fascinated by her grandmother's sewing machine. She describes Cuban culture as one in which mastering the techniques of fine sewing was an admired accomplishment for women. When she first began designing clothes, she adopted the technique, associated with such great couturieres as Mmes. Grès and Madeleine Vionnet, of working directly with fabric by draping and cutting, designing in three dimensions. Like Claire McCordell, she works in simple materials such as denim, cotton jersey, and cotton flannel. She describes her garments as forward-looking and optimistic.

Ruben Toledo was born in Cuba in 1960; he and Isabel met in school as members of the large Cuban expatriate community of northern New Jersey. They quickly recognized one another as kindred spirits and began collaborating in art and design. They were married in 1984.

Isabel showed her first collection in 1985 and was immediately acclaimed as an important new talent on the New York fashion scene. Her clothes—architectural, slightly severe, with black or shades of gray dominating her palette—became highly prized by wearers of fashion-forward, “downtown” styles and were praised in such publications as the *Village Voice*, *Paper*, and *Visionaire*. Acquiring a cult following in New York, Paris, and Tokyo, Isabel nevertheless has had difficulties finding sufficient long-term financial backing to break out of niche markets to reach more widespread recognition.

The Toledos had a major exhibition, *Toledo/Toledo: A Marriage of Art and Fashion*, at the museum at the Fashion Institute of Technology (FIT) in 1999. Ruben's illustrations reached a wide audience in his witty book, *Style Dictionary* (1997). In one of his iconoclastic fashion illustrations, entitled “Fashion history goes on strike,” Ruben portrayed dresses from the past, from New Look to Mod, parading across the page in a militant demonstration, carrying placards reading, “Let us rest in peace! No more retro! Look forward, not backward!” Both of

the Toledos remain on the cutting edge of style, moving fashion forward.

See also **Art and Fashion**.

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Valerie Steele

TOOSH. See **Cashmere and Pashmina**.

TRADITIONAL DRESS Traditional dress may be defined as the ensemble of garments, jewelry, and accessories rooted in the past that is worn by an identifiable group of people. Though slight changes over time in color, form, and material are acknowledged, the assemblage seems to be handed down unchanged from the past. Traditional dress or costume is a phrase used widely both by the general public and writers on dress. It conjures up images of rural people dressed in colorful, layered, exotic clothing from an idealized past in some faraway place. This notion of traditional dress has been scrutinized and found inadequate by many researchers and scholars, but its uncritical use continues into the twenty-first century. The phrase traditional dress or costume is often used interchangeably with the terms ethnic, regional, and folk dress. For a concise discussion of this terminology see Welters and for a fascinating look at how the term is used try a Web search on the words “traditional costume.”

In Webster's Third International Dictionary, tradition is defined as “an inherited or established way of thinking, feeling or doing: a cultural feature *preserved or evolved* from the past” (1993, p. 2422; italics by author). The concept of traditional dress as a static form carried over from the past is usually contrasted with the rapidly changing fashion of “the West.” Ethnographers and travelers documenting actual dress practices provided the original data for later interpretation by other researchers. Early social psychologists were primarily concerned with understanding the human element of fashion change, not with the continuity of a particular dress tradition, thus the reference to tradition or custom was usually brief. General studies of folk or traditional costume were geared toward showing the diversity and splendor of peoples of the world while more recent, specific studies tend toward more

historical and cultural analysis. Tarrant asks the pertinent questions, "What tradition?" and "How old is tradition?" (p. 153), questions that are essential for studying and analyzing the cultural and historic aspects of dress.

Evolution and Traditional Dress

Changing customs in Navajo women's dress shows clearly how dress traditions adapt to changing circumstances over time. Navajo myth tells of the people clothed in garments of shredded cedar bark or pounded yucca leaf. When they moved into New Mexico in the fifteenth century the Navajo wore garments of animal skin. They began to weave with wool after the Pueblo Revolt of 1680, when many Pueblo Indians, already weavers, took refuge with Navajo neighbors and taught them to weave. A dress made from two rectangular pieces of wool fabric, fastened at the shoulders, remained in use until the 1880s.

During four years (1864–1868) of confinement at Fort Sumner, the people were reduced to wearing cast-offs and garments made from flour sacks and whatever fabric they could find. With the advent of the railroad in New Mexico and the establishment of trading posts, Navajo women began to sell their wool and the blankets they made, trading for cotton cloth which they sewed into skirts and blouses. The use of a velvet blouse began in 1890, when a trader brought velvet or velveteen to a post. Only at this point did the ensemble of gathered skirt, close-fitting velvet blouse, and silver and turquoise jewelry worn in the early 2000s by elderly women and by young women on ceremonial occasions become traditional.

Materials

Often made in the family for personal use, traditional dress uses materials commonly available where the maker lives. These materials and styles are often assumed to have evolved in response to environments—wool in cold climates, cotton in warm. But traditional dress often also incorporates imported materials obtained by trade. Exotic fabrics or notions can be incorporated into a people's dress and become "traditional," as Indian madras has for the Kalabari Ijo of the Niger Delta. Although no one knows where it originated, a print cloth called *ondoba*, said to have arrived with the Portuguese in the fifteenth century, "belongs" to the Nembe Ijo of the Niger Delta.

Over time, factory-made materials are commonly substituted for those once produced by hand in the home. Hand embroidery is reproduced by machine. It is also of note that men often adopt cosmopolitan styles while women, as carriers of culture, seem more inclined to retain aspects of traditional dress.

Traditional Dress in the Early 2000s

Although immortalized in the world eye by romantic photos and tourist-oriented advertising, what is known as traditional dress is not commonly worn everyday anywhere in the world; elements of traditional styles are reg-

ularly seen. Education, access to international media, contact with outsiders, and the desire and ability to participate in global consumer culture have all contributed to changes in this form of material culture. Weddings, religious rituals, festivals, folkloric dance performances, and historical re-enactments are occasions for donning the dress of the past in parts of the world where virtually no elements of traditional dress are found in contemporary use.

In other places, traditional dress is one option in a person's wardrobe—there are times when it is expected and necessary but other times when cosmopolitan styles are appropriate. A young woman in South India, where the sari is considered traditional, can wear a North Indian *salwar-kameez* outfit one day, jeans and T-shirt the next, an "ethnic" skirt and blouse from Rajasthan another day, but put on a sari when attending a wedding. After marriage, the same woman might wear a sari more frequently, acknowledging her change in social status as a wife and mother.

Everyone in the world follows some dress traditions in varying degree. Although Americans often don't recognize it, there is a strong element of the past in ritual dress such as that for weddings and funerals. One would not be formally sanctioned for wearing bright colors to a funeral. However, there is a cultural tradition of black or somber dress that would be violated.

Unexamined, the phrase "traditional dress" implies a group of people living an integrated, rural life where group identity is paramount and community values are widely shared and important relative to individual expression. This romantic ideal of a meaningful community life contrasts with the perception of contemporary urban life lived in colorless anonymity. Linked with the common idea that globalized urban life is spiritually and culturally empty, this romantic ideal of traditional dress is kept alive in the minds of those who are furthest from it.

What is called traditional dress might in the early twenty-first century be more correctly called ethnic dress, donned to express diverse identities and affiliations such as cultural pride, nationalist or ethnic group politics, or to make a statement about personal, aesthetic, and cultural values.

See also **Ethnic Dress.**

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Barbara Sumberg

TRAINERS. See **Sneakers.**

TRANSVESTISM. See **Cross-Dressing.**

TRAVEL CLOTHING Travel clothing hardly existed as a separate category of dress until the nineteenth century, when new forms of travel beyond horse, carriage, and sailing ship were developed, and when the Industrial Revolution permitted mass production of fabrics, enabling more classes to afford garments that were designed for specialized and infrequent use.

Prior to that, both urban and rural poor and middle-class people did little traveling and relied on whatever

outer garments they possessed to protect them from dirt, dust, and the elements. Boots, cloaks, coats with extra shoulder capes, and wide-brimmed hats were available to men riding on horseback or in uncovered vehicles. Upper-class men traveling by horseback relied on the same garments. When traveling in carriages, women in the seventeenth and eighteenth centuries could wear a wool riding habit, more easily cleaned than fashionable silks. The cane-framed calash, a high, folding bonnet, introduced in the late eighteenth century, protected women's high hairstyles from the dust of travel; women's iron pattens worn over shoes also protected from dirt and mud.

Generally, however, the condition of roads, and the lack of leisure time for most people, prevented much travel except among the gentry classes. After 1800, more people could afford travel, with the development of public conveyances like canal boats and stagecoaches (old forms, but increasingly used in America) and new inventions, steamships and trains. Travelers were concerned not only with protection from dirt (soot and sparks from coal engines on trains and steamships, dust and mud on carriages), but about appearing in public among strangers—particularly a concern for middle-class women.

Canal travel was not particularly dirty, but its shared sleeping, bathing, and dressing quarters required its users to pack carefully so that propriety and modesty could be respected. Canal boats offered ladies' bathing and dressing rooms not necessarily connected to their sleeping quarters, so women were advised to pack a full-length, modest dressing gown. Men were expected to sleep in their shirt, trousers, and shoes, removing coat, waistcoat, collar, and cravat.

Railway travel had similar concerns and solutions. With limited room for luggage, a smaller holdall was needed for the duration of the journey. The "shawl strap" was a recommended and seemingly popular solution: a change of clothes and undergarments was spread on a large square of sturdy linen or wool, the edges folded over the clothes, and the whole rolled up and bound with two leather straps.

Steamship travel for leisure was not extensive until the last quarter of the century. The combined effects of seawater and soot from the smokestacks were ruinous to clothes, and during most parts of the year, decks could be chilly. Accordingly, warm, enveloping overcoats were recommended, particularly Ulsters, and fine clothes discouraged. Some guidebooks advised wearing old clothes that could be discarded after the journey. Others addressed seasickness, suggesting women wear dresses that could be donned with minimum effort. Shared bathrooms accessed by a walk down a corridor required, as had canal boats and railway cars, modest wrappers.

Small cabins required packing a minimum of clothes for the journey, allowing the remainder of the luggage to stay in the hold. Steamer trunks, unlike the vast trunks

designed to hold the many bulky items in a women's wardrobe for an extensive foreign journey, were only twelve inches high and fit under the cabin's berth. The "shawl strap," beloved of railroad journeys, was often suggested as ideal for the transatlantic trip.

Travel clothing, when referring to extensive foreign travel, takes on two categories: what to wear on the voyage, and what to pack to last for the rest of the trip. Once the rigors of the steamship were over, travelers could resume normal dress, but guidebooks offered comprehensive packing lists, unanimously advising traveling light. Women were advised to bring a few sturdy undergarments without delicate trim to withstand hotel laundries, and a minimum of outfits—the black silk dress and wool tailored suits being top recommendations. Even when travel became more luxurious, women were advised to wear outfits uncluttered by trims and flounces, which were difficult to keep tidy and clean. The tailored outfits that entered women's fashions in the 1870s were ideal for travel.

Travel to tropical climates required specialized equipment such as pith helmets to protect from the sun (with veiling for women) and khaki-colored linen and cotton being logical fabrics and colors in dusty, sandy places. Green-lined parasols—green was thought to protect the eyes—and green sunglasses were also necessary accoutrements.

By about 1900, travel by both sea and rail had become less dirty. Fashion advice for travelers addressed matters of etiquette more than practical issues. Travel costume merely had to fit within pre-existing codes of dress: "The boat is the country, and the train [is] town in the morning," *Vogue* had only to declare in June of 1925, and its readers knew precisely what was proper (p. 58).

Travel by automobile was, in its early years, more of a sport than a mode of travel, and as such its specialized clothing need not be discussed at length here. Open cars required long linen dusters and goggles for both sexes as protection from dust, and ladies wore veils over their hats for some protection from sun, wind, and dust. A uniform emerged for chauffeurs, and long "car coats" kept passengers warm; later in the century, the "car coat" was by definition short, for convenient movement by the driver.

Choosing clothes for airplane travel was also largely a matter of etiquette. While choosing fabrics less likely to wrinkle and show dirt was always a concern, flying in an enclosed cabin did not require specialized clothing. However, luggage design had to adapt to the weight restrictions of airplane travel, and aluminum and smaller suitcases quickly replaced the heavy steamer and other trunks used in railway and steamship travel. Lately, travelers' desire to forgo checked luggage has led to the design of wheeled bags conforming to size restrictions for overhead or under-seat stowing. Additionally, the democratization of travel led to a decline in use of porters, further incentive for designing lightweight, convenient bags.

The later twentieth century saw innovations in synthetic fibers and fabrics useful to travelers seeking clothes that resist wrinkling when packed or worn, take little space in a suitcase, and can be washed in a hotel sink and hung to dry, avoiding costly and time-consuming laundering by a hotel—or easily done in less luxurious locales, as modern travelers venture into locations beyond the traditional centers of culture that were the destinations of nineteenth-century voyagers. Travelers can also purchase garments and gadgets to ease both their airplane journey and the rest of their travels, including specialized toiletry bags and packing organizers; reversible, wrinkle-proof, drip-dry, less bulky dresses and skirts; and garments suited to hot climates.

See also **Outerwear**.

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Alden O'Brien

TREACY, PHILIP Born in rural Ireland in 1967, Philip Treacy was the second youngest of eight children of a baker in the Galway village of Ahascragh. He initially studied at the National College of Art and Design in Dublin in 1985 before moving to London to study millinery at the Royal College of Art. His acclaimed graduate show in 1990 resulted in offers to collaborate with international designers such as Valentino, Versace, and Karl Lagerfeld at Chanel, with whom he worked for ten years. The first hat he designed for Chanel was the twisted birdcage, photographed by Patrick Demarchelier for the cover of *British Vogue*. The same year he established his own company, Philip Treacy Limited, and went on to win the title of Accessory Designer of the Year at the British Fashion Awards in 1991, 1992, and 1993 and again in 1996 and 1997.

The dramatic power of his designs has meant that they appeal to extraordinary, iconic women such as Isabella Blow and Grace Jones. Renowned for her ability to spot and nurture talent, Isabella Blow is probably the most extreme showcase for his work. She first encoun-

tered his hats when working with the fashion editor Michael Roberts at *Tatler* magazine, and on Treacy's graduation invited him to set up a workshop in the basement of her house on Elizabeth Street, Belgravia, London. In 1994 he opened his own shop at 69 Elizabeth Street. Among Blow's other protégés was Alexander McQueen, with whom Philip Treacy collaborated in 1999 on his haute couture collection for Givenchy, which included hats constructed from gilded rams' horns.

Philip Treacy identified 1993 as the year that signaled a new attitude to millinery, resulting from the production of his first annual catwalk show at London Fashion Week. The showcasing of millinery as a design item independent of garments has led to a revival of interest in the wearing of hats. According to Isabella Blow (2003), "In the old days, people were frightened by my hats. But in the last year, or maybe two, Philip has single-handedly broken through the barriers."

Treacy has transformed the hat into an art form. His signature style of playful surrealism allied with complete mastery of the craft skills inherent in millinery has resulted in a unique reputation. Drawing on diverse subjects, from orchids to Andy Warhol, Philip Treacy continues to receive universal acclaim from both fashion press and buyers. Although his couture designs may be extreme in concept and not suitable for everyday wear, Treacy also designs a ready-to-wear line which retails through department stores, and in 1997 he launched an accessory collection that includes hair ornaments, scarves, bags, and gloves.

In 2000 he was invited by the *Chambre Syndicale de la couture*, the governing body of French fashion, to participate in the haute couture show, the first millinery designer to do so in seventy years. Evidence of the broad appeal of his aesthetic, Treacy exhibited at the Florence Biennale in 1996, and in 2001 he collaborated with artist Vanessa Beecroft on an installation at the Venice Biennale. In 2002 the Royal College of Art awarded him an honorary doctorate.

See also **Extreme Fashions; Hats, Women's; Milliners.**

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Marnie Fogg

TRENDSETTERS Functionally, clothes provide warmth and protection. Socially, clothes express status and identity. The first trendsetters were members of the ruling class, particularly monarchs and aristocrats. Queen

Elizabeth I, for example, adorned herself as if her person were the state, creating an unassailable image for herself as Britain's monarch. Similarly, Louis XIV of France dressed to impress, and also set rules regulating what members of the court aristocracy were to wear. By the eighteenth century, however, trends were increasingly set by individuals in urban centers, such as Paris and London, rather than at court.

In the mid-nineteenth century, the wife of Napoleon III, working with the couturier Charles Frederick Worth, set fashions for an eclectic array of *nouveaux riches*, social climbers, old aristocrats, and members of the *demimonde*. Women of the *demimonde* were often entertainers, actresses, and dancers, as well as courtesans. In some ways, they were precursors of modern stars.

By the beginning of the twentieth century, theatrical stars such as Sarah Bernhardt were joined by film stars such as Clara Bow, Marlene Dietrich, and Greta Garbo in setting sartorial trends. For example, the ballroom dancer Irene Castle helped to popularize the post-World War I trend for short hair when she cut her own hair in a "Castle bob." By the early 2000s, actresses remained among the most important trendsetters, joined by pop singers such as Madonna, arguably the most trendsetting woman of the twentieth century.

Fashion magazines—notably *Vogue*—have also played an important part in launching "the Beautiful People" as celebrity trendsetters. Among them were girls of good family, dressed and posed and photographed by fashion editors and photographers. The 1957 film *Funny Face* starred the gamine Audrey Hepburn, whose character lived out the transformation from duckling to swan.

What is a trendsetter? A woman put on a pedestal, an icon that others want to follow. In magazines, they fall into a few categories: the society girl (Gloria Guinness, sometimes known as "the swan," and Babe Paley); the model girl (Jean Shrimpton, Veruschka, Kate Moss); the entertainer (Katharine Hepburn, Sarah Jessica Parker). Gabrielle (Coco) Chanel is a rare case of the designer as trendsetter, since she was the best model of her own clothes.

The qualities these women possess include beauty, status, and larger-than-life personas. In the late twentieth century, models gave way to the phenomenon of supermodels, who commodified trendiness through brand association. Actresses also became associated with particular styles and designers. Trendsetters have become figures thrown into the light by the flare of the paparazzo's flash. Whereas yesterday's social elite had money and status, and actresses and models had beauty, contemporary trendsetters possess a lifestyle (encompassing fashion) that whets the appetite of a global public.

See also **Actors and Actresses, Impact on Fashion; Celebrities; Supermodels.**

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Laird Borrelli

TRICKLE-DOWN The “trickle-down” theory offers a straightforward way of predicting fashion diffusion: a hierarchical process whereby individuals with high status establish fashion trends, only to be imitated by lower-status individuals wearing cheaper versions of the styles. Subsequently, high-status individuals become motivated to differentiate themselves by moving on to a new trend. Initially based upon an explanation of social-class dynamics within western modernity, the theory has since been applied to gender and age relations.

The origin of the theory is generally attributed to sociologist Georg Simmel, although he was actually only one of several writers (e.g., Spencer, Grosse, Veblen) who sought to explain fashion through class structure and social mobility in the late nineteenth century. Through a contemporary lens, Simmel (like others of his day) placed an inordinate emphasis on social class in his explanation of fashion (see Blumer; Davis; Crane). However, in many ways Simmel's analysis was especially nuanced in its blend of psychology and philosophy; it can be read as elaborating a fundamental blend of imitation and differentiation that surpasses social class alone (Lehmann; Carter).

Carter (2003) suggests that a modern scientific goal of assigning order to a seemingly disorderly phenomenon (fashion) led to the restricted (economic-based) naming and life of the trickle-down theory. The historical evidence of such an orderly trickling-down fashion is not very convincing (see Breward; Crane). By the late 1960s, the theory had come under attack, as class-based explanations could not explain the number of styles that bubbled or percolated up from working-class youth or diverse ethnicities (Blumer; King). Furthermore, the speed with which fashion could be “knocked off” in cheaper versions had accelerated to the point that any trickling that occurred was blurry. Indeed, in the twenty-first century's global economy, counterfeit versions of high-fashion handbags appear almost simultaneously with “original” handbags, on the sidewalks outside designer stores in major cities around the world.

McCracken (1985) attempted to rehabilitate the trickle-down theory by relating it to gender. He noted a process whereby women imitate men's fashions in order to obtain more status, only to be usurped by further changes in men's attire. Although McCracken has been critiqued for not demonstrating the differentiation function (on the part of men) adequately, if one goes back to Simmel's analysis, it is possible to establish how the di-

alectical process of fashion simultaneously articulates twin opposites in a single “masculine” or “feminine” look.

More recently, Huun and Kaiser (2000) demonstrated how the basic elements of imitation and differentiation can explain changing infants' and young children's fashions—in terms of age, as well as gender. And, Cook and Kaiser (2004) reinterpreted the trickle-down theory to explain the recent “downsizing” of teen and adult fashion into children's and “tweens” styles. Although the hierarchical (class-based) flow of the trickle-down theory may be challenged in many ways, the basic dynamic underlying Simmel's analysis of imitation and differentiation remains a critical part of fashion theory.

See also **Veblen, Thorstein**.

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Susan B. Kaiser

TRIGÈRE, PAULINE Born in Paris in 1908 to Russian-Jewish émigrés, Pauline Trigère grew up behind the shop where her mother and father, former tailors of military uniforms for the Russian aristocracy, worked in the clothing trade. By age ten she was help-

ing her mother with dressmaking tasks. Trigrère was apprenticed at age fifteen to the couture house Martial et Armand on the place Vendôme, where she quickly showed her aptitude for tailoring and a mastery of the bias cut. In 1929 she married Lazar Radley, a Russian immigrant tailor; the couple had two sons. In 1935 she opened a small wholesale business specializing in tailored suits and dresses. Concerned about the Nazi threat, the Radleys left Paris in 1937, stopping in New York on their way to Chile. At the urging of the designer Adele Simpson, Trigrère decided to stay in New York, and was hired first by Ben Gershel, then as Travis Banton's assistant by Hattie Carengie. In 1941 the Radleys opened a tailoring business with her brother, Robert, that closed when Lazar Radley left his wife and sons.

In January 1942 Pauline and Robert opened another business with a collection of eleven pieces. Robert sold them from a suitcase across the country, receiving orders from many important retail stores. In order to buy fabrics for that first New York collection, Pauline borrowed \$1500 and sold some diamond jewelry for \$800. Within three years her name was widely known. During nearly sixty years in business, she garnered many honors: three Coty Awards, inclusion in the Coty Hall of Fame, the Neiman Marcus and Filene's awards, the City of Paris silver and vermeil medals, and the French Legion of Honor. In addition, she was inducted into the Hall of Fame of the Shannon Rodgers and Jerry Silverman School of Fashion Design and Merchandising at Kent State University (1990); was given a retrospective fashion show to honor her fifty years in business at the Fashion Institute of Technology in New York (1992); received the Council of Fashion Designers of America's Lifetime Achievement Award (1993); and had a retrospective exhibition (1994) at the Kent State University Museum, the repository of several of her earliest garments and sketchbooks that chronicle each of her collections. Also in 1994 she closed her ready-to-wear business and formed a new company, P. T. Concepts, to market her scarves, jewelry, and other accessories. She died in 2002.

Trigrère provided her own witty commentary during her fashion shows. She did not design by sketching, but rather cut and draped fabric directly on a model. The finished garment was later sketched as a record. She was noted especially for her elegant tailoring, innovative cut, frequent use of the bias, and sensitivity to fabric, line, and movement. Fur-trimmed evening dresses became a signature look. She was also the first major designer to use an African American model. Known as an intellectual "designer's designer," Trigrère shaped her career as surely as she shaped her creations: with a strong sense of personal style. "Fashion is what people tell you to wear" she said (Epstein, p. 19). "Style is what comes from your own inner thing" (Nemy, p. C14).

See also **Fashion Designer; Russia: History of Dress; Tailoring.**



Pauline Trigrère. Renowned for her attention to line, tailoring, and cut, fashion designer Pauline Trigrère created her designs by using fabric and a model rather than by first drafting sketches. © MITCHELL GERBER/CORBIS. REPRODUCED BY PERMISSION.

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Jean L. Druesedow

TRIMMINGS A band of colorful ribbon, a silken tassel, a row of buttons, a flash of sequins—trimmings can add texture, color, drama, and visual interest to clothing and accessories.

Prior to the Industrial Revolution, garment trimmings were generally available only to the elite, who flaunted costly dress accents such as gemstones, fine lace, or egret plumes to signify their high social status. In the early 2000s, trimmings of all kinds are manufactured worldwide, from South America to Southeast Asia, and



LIBERACE: TRIMMED TO THE NINES

For his final performance at Radio City Music Hall in 1986, the famed showman Liberace (1919–1987) appeared in a series of elaborate ensembles completely encrusted with pearls, sequins, bugle beads, rhinestones, and ostrich feathers.

are available to all. They constitute a substantial portion of the total international fabric industry's sales, and are used in quantity by makers of evening wear, bridal wear, childrenswear, youth fashions, uniforms, costumes, and millinery.

It's All in the Details

Fabric trimmings such as lace, braid, cord, piping, embroidery trim, and fringe are most frequently used literally to "trim" a garment by attaching them along the edge of the sleeves, hem, collar, or bodice. Trimmings in this category can be made from natural fibers such as cotton, linen, silk, wool, rayon, or raffia, as well as from polyester, nylon, and other manufactured fibers.

Lace is a delicate openwork fabric made of yarn or thread in a weblike pattern. In the sixteenth and seventeenth centuries, the great demand for handmade linen and silk lace for apparel as well as domestic and church use gave rise to major lace-making centers in Antwerp, Brussels, Chantilly, Valenciennes, Venice, and elsewhere. A machine for making lace came into wide use by the 1840s, and the production of most lace today is done by machine, with modern varieties like eyelet lace and stretch lace available.

Braid, cord, and piping can be made from solid colored or metallic thread, or from groups of different-colored threads braided or twined together. They are a salient trimming on military, parade, and police uniforms, especially for dress occasions. Embroidery trim (as distinguished from embroidery done directly on a garment) is sold in bands of machine-embroidered floral or geometric motifs, popular for childrenswear. Another form of embroidery trim is a ribbon-banded style called a "jacquard," a notable detail on Tyrolean clothing. Fringe, which is also sold in bands, is a favorite trim on cowboy-style Western wear and garments affecting a rustic look.

Glitter and Glamour

Spangles, sequins, and rhinestones are often used to trim evening wear and theatrical or holiday costumes. Spangles and sequins—factory-made, small, shiny metal or plastic disks (or other shapes)—can be sewn over the en-

tire surface of a garment, or added to limited areas to add sparkle and color. The show-stopping gowns by designer Bob Mackie (1940–), who has been called the "sultan of sequins," stand out for their exuberant surface application of sequins, rhinestones, and other glittering elements.

The imitation gemstones called rhinestones are made of glass, paste, gem quartz, or crystal that has been cut and polished to provide high reflectiveness. Rhinestones can be attached to a garment by sewing or ironing on individual stones, or stitching on pre-made bands or patches. The Austrian company Swarovski is especially noted for its lustrous, faceted lead-crystal rhinestones in bold colors.

The Milliner's Art

Ribbons and bows are perhaps the most common hat trimmings, though they can be used to trim clothing as well. Contemporary ribbon styles are available in grosgrain, satin, silk, velvet, beaded, wire-edged, floral, pleated, polka dots, stripes, and more.

Individual items that lend themselves to hat trimming include feathers, artificial flowers, pom-poms, and tassels. In nineteenth- and early twentieth-century England and America, a cottage industry of hat trimmers kept workers busy, since no self-respecting woman would appear in public without an artfully trimmed hat. Indeed, some hat styles would not be complete without their particular trim: the pom-pom on the tam-o'-shanter, or the tassel on the fez, for example.

The decorative use of bird feathers was practiced in Pre-Columbian America and Polynesia, as seen in elaborate feather work headdresses and capes from Mexico, Hawaii, and New Zealand. In eighteenth-century Europe, tall plumed headdresses called "aigrettes" enjoyed a vogue among society women. In the twenty-first century, pheasant, turkey, rooster, and ostrich feathers are often used in millinery design, though concerns about the exploitation of rare birds have curbed the resale of imported feathers.

Artificial flowers have been a favorite trimming for millinery and haute couture since the nineteenth century. To create fake flowers, manufacturers treat silk, organza, cotton, chiffon, or velvet with a stiffening agent, dry the fabric, die-cut the petals and leaves in a press, and then paint or dye them for final assembly. Of note are the exquisitely lifelike blossoms made for four generations by Guillet of Paris, whose high-end clients include Lanvin, Emanuel Ungaro, and Christian Lacroix.

Buttons and Beads

Since antiquity, buttons have been made from a variety of materials including bone, metal, stone, wood, and shell. Besides being utilitarian fasteners, buttons can be sewn to a garment as a pure surface ornament. At the annual Pearly Kings and Queens harvest festival in London, buttons-as-trimmings take the spotlight as "royal"

revelers sport elaborate costumes covered from head to toe with mother-of-pearl buttons.

Beads of clay, stone, and glass have a long history, used as a clothing or hair decoration in diverse cultures for centuries, from the Copts in Egypt, to the Benin and Yoruba tribes in Africa, to the Plains Indians of North America. Hand-beading in the contemporary garment industry is often the domain of couture houses, where lavish beaded creations by designers such as John Galiano (1960–) require long hours of careful stitching. Beading is also a major element in bridal wear, especially in the use of white seed pearls to decorate wedding gowns and headpieces. Affordable mass-produced forms of beaded trim include bands, patches, and fringe.

See also **Beads; Braiding; Buttons; Feathers; Knotting; Lace; Ribbon; Spangles.**

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Kathleen Paton

TROUSERS Bifurcated lower-body garments made from textiles, fabric, or leather have existed since ancient times, and trousers rank among the most fundamental pieces of clothing. Ankle to calf-length trousers, wide or narrow, with seamed or wrapped legs were part of the costume of the ancient Chinese, Mongols, Sythians, Phrygians, and Persians. The Sarmatians, the Dakerians, and the Lydians presumably adopted them, after 700 B.C.E., from the Persians. Trouser-clad equestrians seem to have played an important role in their diffusion; even attempts at accurate fitting can be traced back to riding. Depictions of the stocking-like leg coverings, featuring stripes, dots, checks, or zigzag lines, of Asia Minor's soldiers and male and female riders, can be found on ancient Grecian ceramics. The Celts, Germanic peoples, and the Sarmatians were the first to wear the *truss*, a sort of linen undergarment, in the late Bronze and Iron Ages. High-high and ankle-length trousers, sometimes luxuriously woven and artistically sewn out of fabric and leather, are documented as being worn by men and occasionally women of northern tribes.

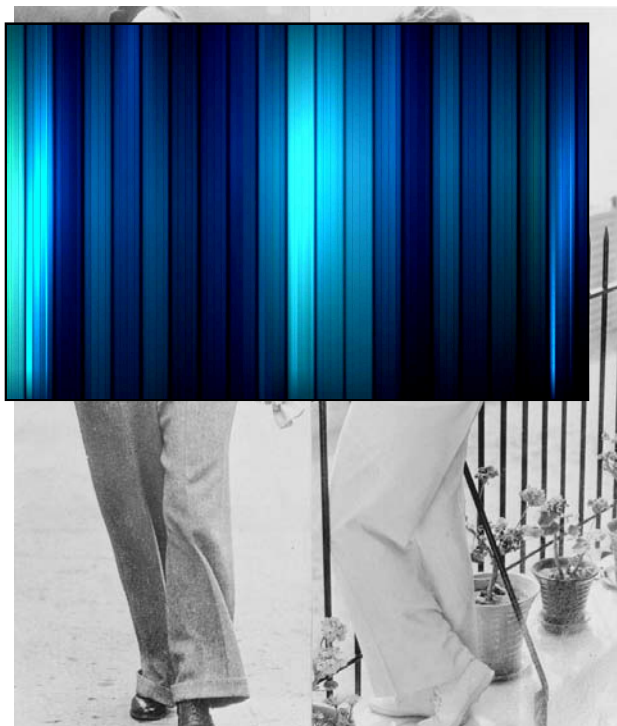
The Greeks and Romans of the Classical period thought of trousers as the "garb of the Barbarians," from



Models display gray trouser suits. The trouser suit has remained the standard outfit of business for men and, by the early twenty-first century, was widely accepted attire for women in business as well. AP/WIDE WORLD PHOTOS. REPRODUCED BY PERMISSION.

whom they vehemently strove to distinguish themselves. When, in the second and third centuries C.E., Roman soldiers, and later, common people, began to adopt trousers for practical purposes, it was forbidden to wear them on pain of punishment in Rome. However, after the fall of the Western Roman Empire (fifth century C.E.), Roman dress no longer set the standards for all of Europe. *Beinlinge* (separate, unattached coverings for each leg) with *trusses* (a kind of short undergarment) became common throughout Europe. In the early and high Middle Ages, leg coverings—woolen, fastened to the belt of the *truss*, under long clothes or short tunics—served as protection from cold and as functional clothing. Women as well wore leg coverings in cold weather or when traveling.

After 1350, the demand for male leg coverings altered dramatically: as a result of the change in knights' armor from chain mail to plate armor; leg coverings had to fit the contours of the body more closely. The leggings became a second skin and—in response to the style of extremely short men's doublets—were made into a sin-



Movie stars model trousers, 1933. Actresses Marlene Dietrich (at left) and Bebe Daniels broke the fashion rule that women should not wear trousers. Trousers were not widely accepted as conventional women's wear until the 1970s. © BETTMANN/CORBIS. REPRODUCED BY PERMISSION.

gle garment by attaching wedge-shaped inserts or fly flaps. The stocking-like hose of the fifteenth century, with its attached feet and heraldic patterns, may be regarded as the first veritable men's trouser fashion. It is, moreover, the first fashion where men and women went their separate ways, men adopting short tunics and hose, and women keeping to their long skirts.

This conspicuous marking of gender, through skirt and trousers respectively, continued in Western culture until quite recently. The identification of man and trousers became universal to such a degree, that trousers, in images and figures of speech, have evolved into symbols for man and manly strength. (See for example numerous prints and caricatures on the theme of the "battle of the trousers.") From the fifteenth century until the late nineteenth century, women very rarely donned men's trousers.

The stylish man's bifurcated garment changed its appearance countless times. At first, Italian sheath hose, with their limited freedom of movement, were widened with a slit; in 1500 the garment was separated into knee breeches, laced at the waist, with stockings attached to the breeches. From these developed, in the early sixteenth century, extremely broad, heavily slashed wide breeches lined with colorful fabrics and worn by the mercenary

soldier. Despite all regulations (sumptuary laws), and public mockery (pamphlets, satirical drawings), extra wide, heavily slashed and flashily decorated breeches with fantastically padded codpieces remained the fashion during the sixteenth century. In Spain, after 1550, fashionable men began to overstuff their wide breeches, which in turn shortened them greatly, creating two balloon-like legs. Spanish trousers, so-called "military bass-drum pants," were worn in national variants throughout Europe, without codpieces after 1600. During the Thirty Years War (1616–1648), knee-length, extremely wide pantaloons, with decorative side buttons and ribbons, were introduced by the French; these developed, after peace was declared, into the skirtlike, heavily decorated Rheingrave, or petticoat, pantaloons (1655–1680). This extreme form of the 1670s was eventually replaced by the simple *culotte*, worn as part of Louis XIV's court attire. The *culotte* was the obligatory part of men's suits until the French Revolution. During the Revolution the *culotte* or breeches were replaced by the long pantaloons or trousers of working-class men.

Simple knee breeches, fastened at first under the knee with ribbons and then later with buckles or buttons, were worn by most upper-class men in the eighteenth century until they began to be replaced during the French Revolution by the long work pants of working-class revolutionaries (the *sans culottes*—"without breeches," so-called because they wore trousers instead). The trousers of the first half of the nineteenth century had varying styles; some were extremely tight, others were broadly pleated trousers (Russian or Cossack pants), and sharply flared, below-the-knee *matelot* trousers. In the 1830s, trousers were long, close fitting, and equipped with straps that fit under the soles of the feet. In the 1850s, pants legs were looser, and the old trouser fly was replaced by a concealed, buttoned middle slit. The former relatively colorful palette grew increasingly sober from the 1860s on, as dark colors and plain materials became usual in everyday and evening clothing. At the beginning of the twentieth century, pleats and cuffs completed the development of the daytime and evening trouser. At the same time, men's sports and leisure clothing became a field for experimentation with the development of knickerbockers, jeans, Bermuda shorts, chinos, and other styles.

The 1880s represent the first considerable public presence for women's trousers. In the 1840s a minority of women, such as Amelia Bloomer, had demanded a "right to trousers" which had been briskly denied. By the 1880s, however, women bicycle riders in pantaloons, bloomers, or trouser-skirts had become visible in many cities in Europe and North America. By the early twentieth century, trousers for women existed for various leisure activities. The couturier Paul Poiret, for example, launched trousers as fashionable dress for women and caused a great scandal. After World War I, however, when people got used to women in trousers, society accepted fashionable pants as beach-wear or exclusive evening suits.

And yet trousers for women still instigated scandals. Marlene Dietrich, for example, caused an uproar by wearing trousers in Hollywood and Europe. It was only in the 1970s that trousers finally won a secure place in the spectrum of women's clothing. Since then, trousers have become acceptable as women's business, recreation, and evening clothing. In cultures outside Europe, one may trace entirely different fashion traditions. Thus in cold climates, such as Siberia, the indigenous inhabitants developed an "arctic" garment, made of a combination long-sleeved jacket and long trousers of leather or fur, which is virtually identical for both men and women. The "tropical" clothing type, featuring wraparound skirts, also recognizes few gender differences, although sarongs and other wrapped garments tend to be tied differently for men and women. In the traditional dress of many Asian peoples, trousers are often seen on women and dresses are seen on men. Arab, Persian, Syrian, and Turkish women wear traditional leg-coverings, as do Cossaks, and Tatars. In Scotland, on the other hand, the kilt is an emphatically masculine garment.

In the context of spreading globalization, long trousers are gradually coming to replace the traditional masculine dress of cultures outside of the European context. The business suit, a standard in European and American fashion since the nineteenth century, is presently becoming a worldwide norm, and women in most of the world can wear trousers without being accused of being masculine.

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Gundula Wolter

T-SHIRT From its origins as men's underwear to its complex role in modern fashion, the T-shirt is today one of the most universally worn items of clothing. Cheap, hygienic, and comfortable, the T-shirt has become an essential basic wardrobe item worn by people of all social classes and ages. Technically, the T-shirt evolved and proliferated at an astonishing rate, aided by the increased availability of American cotton and the invention of the circular knitting machine in the mid-nineteenth century. Its current shape and style developed during the 1930s and it became universally worn as an outer-garment after World

War II. In 2004 over two billion were sold worldwide. Contemporary versions range from inexpensive multi-packaged units to haute couture editions to high-tech fiber versions used in sports and health industries.

Shirts of T-shaped construction were worn as early as the medieval times to protect the body from chafing by heavy, metal armor. Civilians adopted the shirt as a protective and hygienic barrier between the body and costly garments. Made of cotton or linen, the shirt was more easily washable than silk or woolen outer garments with complex ornamentation. These shirts were made with long tails that wrapped around the body serving as underpants. The shirt was still always worn with a waistcoat or vest and jacket over the shirt. Wearing a clean, laundered shirt showed off a gentleman's wealth and gentility. Shirts changed very little in shape from their introduction in medieval times through the mid-nineteenth century. They were loose fitting, made of a woven fabric, and constructed with rectangular pieces that formed a T shape.

In the late nineteenth century when health-oriented concerns became prevalent, doctors and physicians advised wearing warm undershirts to protect from colds and rheumatism. Dr. Jaeger lauded the healthful benefits of wearing knitted underwear made of wool and manufactured his own line of knit undershirts. The circular knitting machine patented in 1863 made it possible to mass-produce knit jersey undershirts and hosiery for wide distribution. This technology created a greater range of types and refinement in undergarments. Its closer fit looked more like the modern T-shirt than earlier loose-fitting, woven shirts.

Sailors in the nineteenth century wore white flannel undershirts under their woolen pullovers. These shirts were worn alone on deck for work that required freedom of movement. The white cotton knit T-shirt was adopted as official underwear for the U.S. Navy in 1913. Fast drying, quick, and easy to put on, sailors responded positively to the new garment. The U.S. Army adopted it in 1942, in its classic form. Nicknamed skivvies, each soldier's name was stenciled on. In 1944 the army colored the shirt khaki to camouflage with the extreme tropical environment of the South Pacific. The vast media coverage of World War II popularized the T-shirt as a symbol of victorious, modern America and glorified it as a masculine, military icon. Returning soldiers retained the style after the war because of its comfort, practicality, and image. A Sears, Roebuck and Co. catalog slogan in the 1940s took advantage of the heroic image that had developed during the war, "You needn't be a soldier to have your own personal T-shirt." Since that time it has been used in every war and has been appropriated by paramilitary factions. Like the trench coat it has also become an integral part of civilian dress from street fashion to haute couture.

Fruit of the Loom was the manufacturer who began marketing T-shirts on a large scale in the 1910s, first

supplying the U.S. Navy and then universities with white T-shirts. The company manages its own cotton fields and yarn production. Each shirt undergoes 60 inspections before it is packaged. From the rebels of the 1950s to preppies who paired them with pearl necklaces in the 1980s, the company remained a number one producer of T-shirts through the 1990s and is still a competitive brand. The P. H. Hanes Knitting Company, founded in 1901, introduced a new style of men's two-piece underwear. They have been a major supplier of T-shirts to the military and to the Olympics in addition to vast civilian distribution.

An increase in sports and leisure activities gave rise to new forms of clothing in the latter part of the nineteenth century. Close-fitting knitted woolen swimsuits made in the tank-shaped style of undershirts accustomed the eye to seeing more skin and one's body shape in a public place. By the 1930s T-shirts were standard sporting wear at colleges and universities. The earliest shirts printed with school logos served as uniforms for school sport teams. These sport uniforms encouraged a new casualness in dress among the middle classes that was important to the T-shirt's general acceptance. The cotton T-shirt has remained a mainstay of sports activities because it is absorbent, quick-drying, and allows free range of movement. The T-shirts' role in sports has moved beyond team identification and practical function; it is crucial to the marketing, promotion, and profitability of the sports industry.

In post-World War II years, the T-shirt was primarily worn for athletics, informally at home, or by blue-collar workers for physical labor. Marlon Brando's portrayal of Stanley Kowalski in *A Streetcar Named Desire* (1951), wearing a visibly sweaty T-shirt clinging to his musculature, captured an erotic power of the shirt. The strong associations of masculinity developed earlier in patriotic form in military images, now had an amplified sexual expression. The silver-screen images of Marlon Brando in *The Wild Ones* (1953) and James Dean in *Rebel Without a Cause* (1955) embodied the spirit of American youth in the 1950s. The impact of these movies was profoundly influential on society in solidifying a language and image of rebellion. Through these movies the white T-shirt, blue jeans, and black leather motorcycle jacket became the uniform of nonconformists searching for meaning in conservative postwar consumerist society. Other important musicals, films, and television programs from *West Side Story* (1961) to *Happy Days* (1974) to *American Graffiti* (1973) repeated and confirmed the rebellious meanings. Young people recognized this style as a new American fashion. Administrators prohibited wearing the T-shirt to school in an era when most people still wore shirts with collars. Not only was it rejected because of its informality, but the knit quality of the T-shirt is more clinging than a shirt or blouse. The Underwear Institute declared in 1961 that the T-shirt had become a dual-purpose garment that was acceptable as both outer-

wear and underwear. In the early 1960s, a female image was promoted in the pivotal French film, *Breathless* (1960). Jean Seberg was featured as a young American selling the *Herald Tribune*, wearing a white T-shirt silk-screened with the newspaper logo that showed off her curvaceous figure and at the same time embodied a new, youthful androgynous style of seduction and feminine power. This film did much to introduce the style into female fashion. The erotic aspect of the T-shirt has been exploited in wet T-shirt contests that not only make use of the clinging quality of the fabric, but also its semi-transparency when wet.

Since the late 1960s and 1970s, the T-shirt has evolved and proliferated at a rapid rate. Decorative techniques used to create expressive statements on T-shirts became popular from the 1960s onward. Graphic designs, novelty patterns, and written words lionize rock 'n' roll bands, promote products and places, and express political and community-minded causes. Rapidly made and inexpensive, imprinted T-shirts can respond quickly to popular and political events. The first political use was in 1948 when the Republican candidate Thomas Dewey distributed T-shirts that read "Dew it with Dewey." The graphics for one of the most printed and widely copied designs, "I Love New York," was created in 1976 by graphic artist Milton Glaser.

Technological advancements in inks used for silk-screen printing in the early 1960s made this ancient technique easy, inexpensive, and fast. Underground artists who were decorating surfboards and skateboards on a cottage-industry level were some of the first to put designs on T-shirts. The shirts were an inexpensive canvas for expression. The hot iron transfer technique introduced in 1963 was even easier and faster to use. The fast-heat pressure-press widely available in the 1970s gave consumers the ability to choose the color of the shirt and its image or wording, and have it custom prepared in the store within minutes. In a 1976 *Time* magazine article, a Gimbels department store executive claimed that the Manhattan store sold over 1,000 imprinted shirts a week. Current digital processes allow for the printing of complex images with a professional appearance. Flocking, bubble coating, and embroidery are all used to create textured designs. With these two techniques the design area is coated with glue and then dusted with fibers that are attracted by electrostatic means that affix them perpendicularly to the surface of the fabric leaving a velvety surface. Embroidered designs, whether done mechanically or manually, can be enhanced with beads, sequins, feathers, and other materials.

Community-minded causes were print designs that were most popular in the 1960s and 1970s. Images and messages about the Vietnam War, Civil Rights, peace and love, and feminist movements were prevalent. "Make Love Not War" and "Save the Whales" were two of the most popular messages. British designer Katherine Hamnett created a revival in T-shirts bearing political written messages in 1984 when she wore an oversized T-shirt

bearing the message “98% of people don’t want Pershings” in a public meeting with British Prime Minister Margaret Thatcher at the height of the Falklands War.

More than a passing fad, imprinted T-shirts have become an integral part of brand marketing, whether distributed as promotional gifts or to generate revenue. In 1939, Metro-Goldwyn-Mayer used the T-shirt to promote one of the first color movies made in Hollywood, *The Wizard of Oz*. Budweiser started stamping its logo on shirts in 1965 but it was the following decade that the idea was spread to all types of brands, from Bic to Xerox. In the case of the Hard Rock Café, collecting logoed T-shirts from its locations around the world has become a significant portion of the draw to the restaurant.

In 1983 the *New Yorker* reported that the industry sold 32 million dozen items in 1982. Although there are fads for different styles and colors, the imprinted T-shirt is unique in that men, women, and children of all ages, shapes, and social standings universally wear it.

Pop artists Andy Warhol, Keith Haring, and Jenny Holzer pioneered the use of the T-shirt as a work of art. In the 1980s contemporary fashion’s inclusion in museum exhibitions considered the many designer versions. Also in the 1980s, with the explosion of marketing of museums, masterworks of art were reproduced on T-shirts and sold in their gift stores.

High fashion adopted the T-shirt as early as 1948. A model appeared on the cover of *Life* magazine and ran a story that featured T-shirts by American designers Claire McCardell, Ceil Chapman, and Valentina. The article demonstrated how the sports shirt was now a street and evening style. The 1960s saw it go from street fashion to silk haute couture versions in the collections of such designers as Pierre Balmain and Christian Dior. From Woodstock to Yves Saint Laurent Rive Gauche to Vivienne Westwood, by the 1970s the T-shirt was part of all sectors of dress. Logoed shirts by Lacoste and Polo Ralph Lauren of the 1980s and 1990s were popular indicators of status. The black T-shirt became the uniform of the trendy and hip in the 1980s. Bruce Weber’s photos of models wearing Calvin Klein’s T-shirts became an icon of 1990s sexuality and minimalism. Designers such as Donna Karan, Giorgio Armani, Tom Ford, Jean Paul Gaultier, and Helmet Lang have worn the T-shirt as their own identifying uniform. Designer shirts are usually made from a high-quality cotton, have an elegant neckline, and well-cut and sewn sleeves. Japanese designers Issey Miyake and Yohji Yamamoto have led new ways of thinking about the T-shirt in their deconstructionist work through cutting, slashing, and knotting. Miyake’s vision has ranged from his Janice Joplin and Jimi Hendrix T-shirt of the 1970s to his piece of cloth shirts by the yard of 1999. The T-shirt has been pivotal to the revolution in lifestyles and attitudes that formed the second half of the twentieth century and its impact on fashion continues.

See also **Politics and Fashion; Sportswear; Underwear.**

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Dennita Sewell

TURBAN The turban is essentially a headgear that uses fabric of varying width and length, which is twisted and turned around the head. The wrapped folds derived produce a “fitted effect” akin to a stitched or an engineered head covering. Though length, style, color, and fabric may vary as geographical locations change, the basic concept and construction of the turban remains unaltered. This is probably the widest and most flexible definition of this garment considering the many forms in which it exists.

Little is conclusively known of the origins of the turban. The earliest evidence of a turban-like garment is from Mesopotamia in a royal sculpture dating from 2350 B.C.E. Thus, it is known that the turban was in use before the advent of Islam and Christianity, therefore the origin of the turban cannot be ascribed to religious reasons alone. It is also mentioned in the Old Testament and Vedic literature from India. Sculpture from Central India (100 B.C.E.) provides detailed visual evidence of the use of turbans. These headdresses were originally worn by royalty and spiritual leaders and used to commute power, often being adorned with jewels and accessories to display wealth and grandeur.

In some form or another, the turban has been important in many cultures and religions. It is still in use in rural areas in Persia, the Middle East, Turkey, parts of Africa, and the Indian subcontinent where wrapped, as opposed to stitched headgear, continues to be preferred. Historically, draped clothing has always had a special significance in eastern culture. Watson notes that “certain strict Hindus still do not wear cut or stitched cloth as for them a garment composed of several pieces sewn together is an abomination and defilement” (p.11). Though turbans are worn primarily by men, literary evidence reveals that they were used by women on rare occasions in the past. “In Vedic literature Indrani, wife of Indra, wears a headdress known as usnisa” (Ghuyre, p. 68). Some of the earliest terms for the turban in English are *turbant*, *toliban*, and *turband*. These represent the

French adaptation of the Turkish *tulbend*, a vulgarism for the term *dulbend* from Persia, *didband*, a scarf or sash wound around the neck.

In India this headdress is known by many different names locally. *Potia*, *usnisa*, *pag*, *pagri*, *safa*, and *veshtani* are some of the names used for the turban. The Sikhs, a community that dictates its followers to wear the turban, call it *dastaar*, while the Muslim religious leaders refer to it as the *kalansuwa*. In the earliest times, cotton was the fabric most commonly used as turban material. This is because it was affordable and abundant, apart from being the most comfortable fabric to use in tropical or temperate climates where it was most worn. Fabrics such as silk and satin saw limited usage among the more affluent and powerful class. Though there are innumerable variations in the turban, they can easily be divided into two broad types—long turbans and square turban pieces. The long piece is seven to ten meters long with the width varying from twenty-five to one hundred centimeters. The square pieces could vary in size between one to three meters per side, with one to one-and-a-half meters constituting the most useful size. There are an amazingly wide variety of turbans across different cultures and religions. Distinctions are made on the basis of size, shape, material, color, ornamentation, and method of wrapping. In the Muslim world, religious elders often wear a turban wrapped around a cap known in Arabic as a *kalansuwa*. The shape of these caps can be spherical or conical and this produces variations in the turban shape. In Iran, leaders wear black or white turbans wrapped in the flat, circular style. In the Indian state of Rajasthan the style of turban may vary even within the distance of a few miles. The Rajput turbans are remarkably different from the kind worn in any other region in India. There are specialists called *pagribands* whose skill is in the art of tying the turban and were employed by the erstwhile royalty for their services. Some famous styles from Rajasthan are the *Jaipur pagri* and the *Gaj Shabi* turban, the fabric of which is dyed in five distinctive colors and was developed by Maharaja Gaj Singh II from the Jodhpur royal family.

The turban as a headdress is not merely a fashion statement or cultural paraphernalia; it has symbolic meaning beyond the obvious. It serves to identify the wearer as a member of a particular group, tribe, or community, and serves as an introduction to their cultural, religious, political, and social orientations. Sikh men commonly wear a peaked turban, that serves partly as a covering for their hair, which is never cut out of respect for God's creation. The turban has significant associations with the concepts of respect and honor. A man's turban is supposed to signify his honor and the honor of his people. The exchange of turbans is considered a sign of everlasting friendship, while presenting someone with a turban is considered a great token of esteem. An exchange of turbans also signifies a long relationship and forges relationships between families. Thus, the turban is an intrinsic part of all ceremonies from birth until death.

Conversely, it is considered a grave insult to step over or pick up another man's turban. It is linked intrinsically to the "ego" of a person. To remove a turban and lay it at another's feet symbolizes submission and an expression of humbleness. The turban at a glance conveys the social and economic status of the wearer, the season, festival, community, and the region. It is also distinctive by the style of wrapping—each fold telling its own story. The tightness of the drape of the headgear, the lengths of the hanging end, the types of bands which are created on the surface, all say something about its wearer.

The colors of turbans vary in different cultures and are imbued with complex connotations, emotional context, and rich association. They are used to convey mood, religious values, customs, and ceremonial occasions. In India, ocher is the color of the saint, saffron denotes chivalry, and prosperity. White turbans, considered by some Muslims to be the holiest color, are used for mourning and by older men, whereas dark blue is reserved for a condolence visit. Among Sikhs of north India, blue and white cotton turbans are essentially religious in nature. In the Middle East, green turbans, thought to be the color of paradise, are worn by men who claim descent from the prophet Muhammad. Shape and size of the turban are determined by many conditions. Chief among these are the climate, status, and occupation of a person. Turbans are big and loose without hanging tails in the hot desert and thus serve a protective function. Merchants involved in more sedentary activities would wear ornamental turbans with long hanging tails.

The turban was introduced into fashionable European dress in the early fifteenth century and its usage continued until the sixteenth century. It has been revived many times in women's fashion at intervals since the sixteenth century. The turban has acquired a more contemporary form in the twenty-first century. Though it continues to exist in various parts of the world in its more traditional form, of late various fashion designers and couturiers have adapted the turban to give it a more fashionable and chic look, making it a popular fashion accessory. Even though in its more contemporary form the turban may not retain the same symbolism that is attached to its more traditional form, it nevertheless reinforces the importance of this garment.

See also **Headdress**.

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Vandana Bhandari

TUXEDO Throughout the twentieth century, the tuxedo was emblematic of occasions when men were requested to dress formally after dark, whether for drinks, dinner, or some other gathering. The garment developed at a time in the late nineteenth century when men in the upper levels of society began to demand that their clothes be cut to accommodate the increasingly casual nature of leisure time. As with many fashion innovations, credit for the new style of jacket intended to be worn by men in the evening was claimed by many individuals. In fact the tuxedo jacket arose from sartorial innovations in both America and England. It succeeded in ushering in a new level of formality, intermediate between full white-tie formal wear and the lounge suit, that is only now showing signs of fading from usage.

The term tuxedo derives from Tuxedo Park, a residential club colony of rustic mansions in the outer suburbs of New York, founded in 1886 by the wealthy Lorillard family and some of their friends. The Tuxedo Club's annual Autumn Ball was an important event in the New York social calendar; the dress code for the ball would normally have been white-tie and tails. However, in 1885 James Brown Potter, a charter member of the Tuxedo Club and friend of the Lorillard family, had been introduced to the idea of the dinner jacket by the Prince of Wales, who was later to become Edward VII. The Prince had recently created a new evening jacket to be worn at his country estate at Sandringham; it was a black jacket without tails, inspired by the smoking jackets that men would wear when retiring to the smoking room after a meal. A year later, Pierre Lorillard and his son Griswold had their tailor design similar dinner jackets with satin lapels, with a cut similar to the equestrian jackets worn for fox hunting. These "Tuxedo jackets" soon caught on as the customary attire for semiformal evening events in New York society.

In a separate development, the French responded to the need for a lighter semiformal jacket for warm Mediterranean evenings by creating the Monte Carlo. Although all of these developments show the influence of sporting, hunting, and leisure dress as a means of modernizing a garment by the simplification of its attributes and by the easing of bodily restriction in its cut and construction, it is from the American sense of casualness in formality that the tuxedo derives most of its meaning.

As an alternative to the black tailcoat, the tuxedo was differentiated from the lounge jacket through a fairly strict definition of what constituted it and what it could be worn with. Principally in black, the jacket could bear peak lapels or a shawl collar faced in either silk or grosgrain, and was matched to a pair of trousers with a plain silk stripe running down the side of each leg, without turned-up cuffs. The obligatory furnishings of a black bow tie and cummerbund (when worn without a waistcoat) did not become fully established until the 1920s. At that time, too, the Duke of Windsor refined the narcissistic possibility of the tuxedo by having a dinner jacket made in midnight blue. Ever conscious of his own appearance, the Duke had noted that under artificial light, midnight blue seemed blacker than black. Better still, it also registered darker in photographic terms on newsprint giving the garment the weight of royal authority executed as a self-conscious exercise in style.

The co-option of the tuxedo by women from the late 1960s on indicates a performative sense of playfulness, transgressing the costume's once rigid gender implications. Yves Saint Laurent's *le smoking* (named after the French term for the tuxedo) was launched in spring 1967 as the singular concept for his entire couture collection. Saint Laurent's technique was to soften the tailoring while retaining the angularity of the cut which, when accessorized with stiletto heels and dramatic makeup, formed a contradictory image of femininity without compromise. This proposition is most clearly articulated in a photograph by Helmut Newton where a woman, unaccompanied in a street at night, pauses to light a cigarette. As a statement of style it is unsurpassed. All designers who have followed on from this deviation, including Ralph Lauren's form-following tuxedo suits, Giorgio Armani's textured interpretations, and Viktor and Rolf's historical pastiches, underline the singular importance of this sartorial appropriation in women's dress as expressive of modernity.

The modulations in the details of the tuxedo across the postwar period are reflected in the sartorial taste of the literary and filmic figure James Bond. More than any other figurehead, Bond has been the model that most men have looked to when considering a style of tuxedo when occasion demands. Sean Connery's depiction of Bond in early films such as *Dr. No* (1962) and *Diamonds Are Forever* (1971) crystallized an early 1960s sensibility of a black "tux" with lean lapels, satin cuffbacks, covered buttons, and a folded white handkerchief in the top pocket. The clipped and minimal detailing was suggestive of both acumen and agility in a louche world to which many men aspired. The contradiction is that Bond is better known in the public imagination for the white rather than the black tuxedo jacket, necessitated by the range of tropical settings and number of casinos that the character frequented.

The other institution that upholds the suitability of the tuxedo for special-occasion dress is the Oscar ceremony.

As a necessary foil to the elaborate costumes worn by the invited actresses, the tuxedo lends a certain formal gravity to support the very unstable nature of dress designs that appear on the red carpet on a yearly basis. In the vogue for women to reveal the actuality of their bodies in the dresses they wear, the tuxedo becomes the monochromatic means for men to encase the actuality of their own bodies in a formal armor that reveals very little of the true self.

Originating as a relaxed alternative to formal wear, the tuxedo has become emblematic of celebration and special occasions and a potent sartorial symbol of ceremony. When worn well, it conjures up a ritualistic sense of propriety and the debonair expression of a lost era.

See also **Formal Wear, Men's.**

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Alistair O'Neill

TWEED Tweed, made from wool and wool mixtures, comes in a phenomenal range of color and weave effects. Originally tweed was made only in the twill weave or variations of that structure. It is debatable whether the name tweed originated from a misreading of an order for *tweel* (Scottish for twill), or whether the cloth is named after the Tweed river in the Borders region of Scotland. However, it is certain that tweed originated in the Scottish woolen industry of the early nineteenth century, where locally crafted woolens were transformed into fashion textiles woven in a factory and sold to national and international markets. This shift of the late 1820s was partly precipitated by the adoption of the black-and-white shepherd's check as a fashionable cloth for men's trousers in the late 1820s.

Trade journals of the period, such as *Textile Manufacturer*, indicate the reputation of Scotch tweed for high aesthetic appeal and quality of manufacture. Interestingly for a branch of the nineteenth-century textile industry renowned for the production of constant novelty and variety in design, the bulk of their cloth was designed for menswear. The origins of the Scottish tweed industry and its success from the 1830s were largely driven by the consumption of cloth for sporting and leisure wear. However, the range of cloths produced including Saxories,



"The products of Scottish woolen looms after 1830 were identifiable by three design characteristics—skillful use of color, employment of pure virgin wools, and uniqueness of texture. These factors, combined in a carded cloth, gave tweed its quality and distinctive appearance." (Clifford, p. 75)

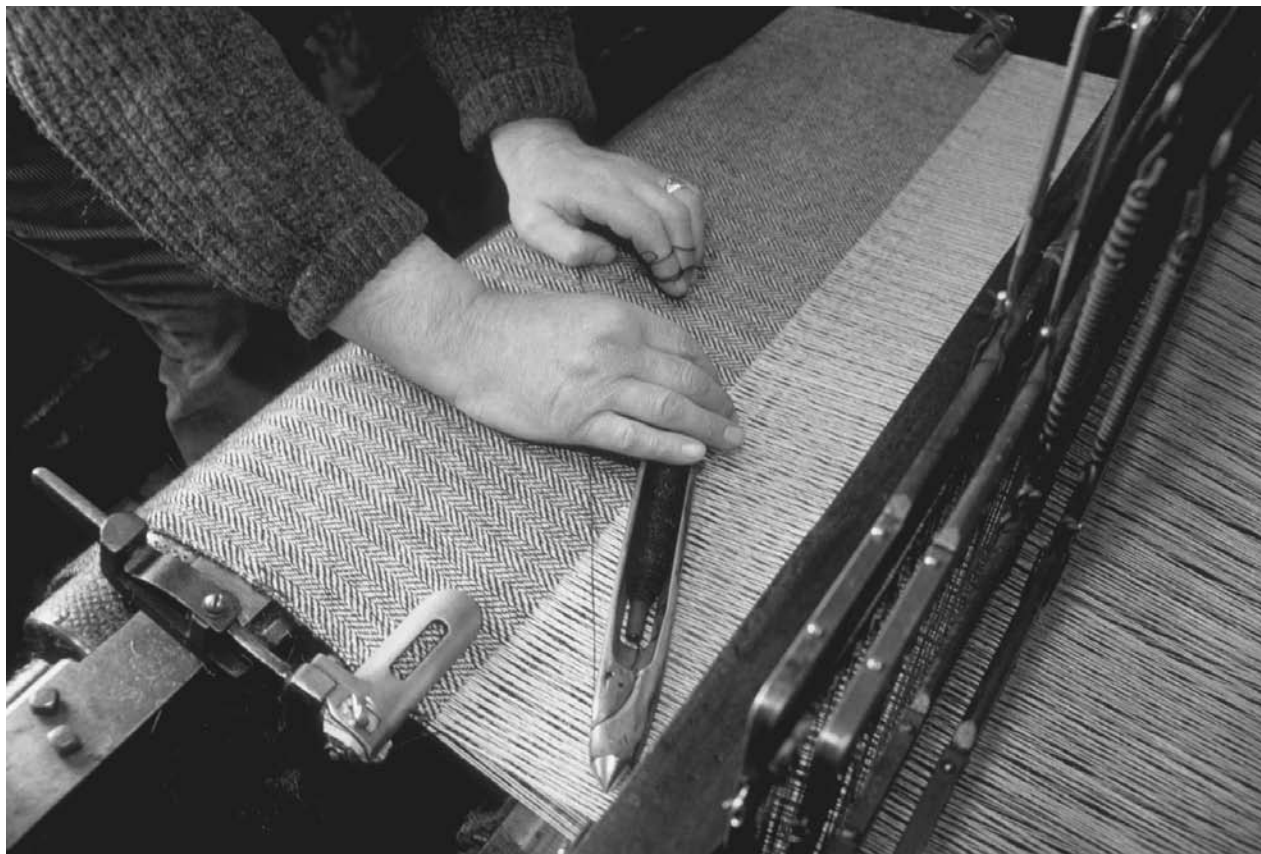
Cheviots, and homespun tweeds and the increasing tendency towards informality in male dress meant that by 1900 tweed was also widely worn within a variety of urban contexts, mainly as overcoatings, trouserings and suitings. Saxony tweeds are fine and densely woven and have a soft, smooth handle. They are made from merino wools and the finest versions are indistinguishable from worsted cloths. Cheviot tweeds have a rougher appearance and more open texture than saxonies, although the lighter-weight versions were widely used as suiting and trousering cloths in the late nineteenth century. The popularity of tweed as a fashionable menswear cloth continued into the twentieth century; however, along with tailoring, it went into relative decline from the 1970s onward.

Important Tweed Patterns

Late nineteenth-century tweed patterns include two that are among the few seminal textile designs that have been repeatedly used in both men's- and women's wear since the mid-nineteenth century. The first of these is the Glen Urquhart, a black-and-white check that originated in the early 1840s and which, with the addition of a red or blue over-check, has widely and erroneously been known as the Prince of Wales check. In the United States, the term Glen plaid was used to describe this sporty but elegant cloth, particularly popular from the 1930s to 1960s for men's suitings. The Coigach, which Johnstons of Elgin trace in their records back to 1846, also became widely known throughout the trade. This black-and-brown check, a variation on the simple shepherd's check, was subsequently adopted in the 1870s by a gun club in America, which led to its being universally known as the gun-club check.

Expansion and Imitation

The international reputation for design of the Scottish mainland tweed industry led by the late nineteenth century to many imitators and competitors. These included those based in Yorkshire, Ireland (Donegal tweed), and the islands of Harris and Lewis in the Outer Hebrides of Scotland. The Yorkshire woolen manufacturers were among the first to use Scotch-tweed designs as a basis for making cheaper novelty cloths aimed at the mass market. Yorkshire tweeds thus tend to be defined by their place



The weaving of Harris tweed. Weavers of Harris and Lewis Islands, in the Scottish Outer Hebrides, started producing this coarse, homespun tweed in the 1880s. Designer Vivienne Westwood included this tweed in her fashions during the twentieth century.
© DAVE BARTRUFF/CORBIS. REPRODUCED BY PERMISSION.

of manufacture, rather than by any distinctive visual characteristics. The Harris-tweed industry was established from the 1880s on the islands of Harris and Lewis, through coordination of the efforts of local hand weavers. This coarse-textured, homespun tweed has survived many difficult periods to be championed in the late twentieth century by the designer Vivienne Westwood, whose logo is closely related to the Harris-Tweed Orb label. Donegal tweed also developed in the late nineteenth century and again principally involved hand-woven cloths. Its characteristic salt-and-pepper effect initially came simply from the use of natural undyed wool, until cooperation with the Harris-tweed dyers generated more complex designs.

Tweed in Women's Wear

From at least the early 1860s, women adopted tweed for outer garments such as jackets, cloaks, paletots, and coats, despite the fact that tweed was predominantly a men's wear cloth. The increasing participation of women in sports, such as countryside walking, shooting, and, later, cycling, led in the 1870s to the development of the tailored costume. This featured a matching jacket and long

skirt that were generally made from some form of tweed. By 1900, the tailored costume had become accepted as informal or sporting wear for women of all classes, despite its earlier connotations of "mannishness" and feminism. The tweed industry, however, did little at this period to adapt its designs for women, other than to make them in lighter weights of cloth.

In the early twentieth century, British couturiers, such as Digby Morton, Hardy Amies, and Charles Creed, helped to stimulate international markets for superbly tailored tweed suits. The French couturier Coco Chanel was also inspired to include it in her collections after traveling to Scotland on a fishing trip with the Duke of Westminster in the 1920s. Her desire to include tweed in her exclusive designs was such that the Duke subsequently bought her a Scottish tweed mill. Linton Tweeds of Carlisle in Northern England has maintained an exclusive relationship with the House of Chanel since 1928. Tweed has since become an integral element of the signature suits that are endlessly reinvented by the House of Chanel.

Contemporary tweed manufacturers aim to maximize the potential of international markets for "traditional

British style” and also to promote their links with the more volatile consumers of radical, innovative fashion. Tweed retains traces of its earlier history in the present, on the one hand as remaining representative of British class and conservatism. However, it also exists as an ephemeral fashion textile that contributes to the rapidly changing visions of designers such as John Galliano at Dior, Alexander McQueen, and Vivienne Westwood.

See also **Chanel, Gabrielle (Coco); Galliano, John; McQueen, Alexander; Scottish Dress; Westwood, Vivienne.**

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Fiona Anderson

TWENTIETH-CENTURY FASHION Women’s fashion at the beginning of the twentieth century was largely a matter of status. The stylish silhouette was defined by the narrow *sans-ventre* corset, which squeezed away the belly and gave the body an S-shaped line; by the long, sweeping skirt lengths; and by high rigid collars. Textile designs took the lead from art nouveau plant ornamentation. Parisian couturiers, such as Jean-Philippe and Gaston Worth (sons of the first celebrated grand couturier Charles Frederick Worth), the Callot sisters, Jacques Doucet, and Jeanne Paquin, were at the forefront in such society dresses.

This style was diametrically opposed by the “health dress,” propagated by advocates of women’s rights, artistic women, and doctors. This design hung loosely without a corset. Its sack cut was rejected by most style-conscious women, despite the designs of art-nouveau artists like Henry van de Velde.

The suit began to establish itself as a multi-faceted garment, becoming a symbol, eventually, of democratic

fashion. The businesswoman used it in her career and the society lady as a travel and recreation outfit. The jacket was mostly styled in a masculine cut with lapels and cuffs; the frock coat was occasionally shortened above the ankle. Suits were offered by manufacturers as well as posh tailors such as John Redfern and Henry Creed. With the advent of the suit, the blouse became the central style element, featuring both luxuriously decorated and simple models. Comfortable kimono blouses, with cut-out sleeves, could be worn over skirts. Top coats, or paletots, taken from men’s fashion, and carcoats or dusters, satisfied the desire for functional clothing. Around 1908, the Parisian couturier Paul Poiret created a new style called *la vague*. Inspired by the *Ballets Russes*, he combined the body-liberating “health dress” with elements of Asian dress. Paul Poiret had ties with the world-famous Vienna Workshops, which operated their own fashion department.

Originating in England, the Edwardian style (named after King Edward VII) was the leader in international men’s fashion. Men’s fashion was regulated by exact rules, which were published by prominent tailors, as to when and under what circumstances each suit was to be worn.

Business attire included the sports jacket (sack coat) and the more elegant suit jacket. Daytime suites incorporated the frock coat (Prince Albert). The cut-away was considered suitable for more private and prestigious occasions. The smoking jacket fulfilled the role of comfortable, casual evening attire. There also existed specialized sporty ensembles. It was important always to choose the correct hat: soft felt, bowler, homburg, canotier, panama, or top hat. There were also many different coats to choose from, such as paletots, chesterfields, raglans, and ulsters.

Fashion 1910–1919

International fashion until 1914 was heavily influenced by the avant-garde French couturier Paul Poiret. He helped initiate the Art Deco style and inspired other designers such as Erté and Mariano Fortuny, whose delphos gowns of the finest pleated silk were also world famous. In 1910 Poiret publicized the hobble skirt, which was, despite its uncomfortable cut, quite fashionable for a short time. It fell loosely, straight to the top of the calf, but was narrowed, from below the knee to its ankle-length hem, with such a narrow yoke that a lady could only hobble. Poiret also proposed a long pants-dress, but few women dared to be seen on the streets in the new *jupes culottes*. For eveningwear, Poiret even suggested broad harem pants worn under a long tunic with a wire-stiffened, upturned hem.

From 1912 until the outbreak of World War I, evening clothes were marked by the new social dance craze, the Argentine tango. Poiret’s creations seemed custom-made for the new popular dance: closely wrapped skirts with high slits in the front, gold-embroidered tunics, and turbans with upright feathers. Men wore the cutaway and the fashionable frock coat, sometimes in strong colors

like dark red, or featuring checkered trim. Accompanying hats were oversized.

During World War I (1914–1918), clothing tended to be as simple as possible: moderately wide skirts, not quite reaching the foot, and hip-length jackets. In 1915–1916, war crinolines—ankle length and fluffed with two or three skirt layers—were *en vogue*; a year later, however, these fell victim to the more economical use of fabric provided by the sack cut. The fashion in 1918 was livened up by large side pockets and skirts that narrowed towards the hem, creating the barrel look of 1919. Most of the fashion salons in Paris had closed. But some wealthy women bought comfortable jersey suits with hip-length jumpers and simple skirts from Gabrielle Chanel in Deauville, thereby establishing her fame. In the United States, especially in New York, clothing manufacturers were active.

The most important novelty of twentieth century women's clothing occurred outside of the fashion world. Long trousers for women were inaugurated, neither by haute couture nor by every-day fashion, but by women's work clothing, which was still mostly borrowed from men. Directly following the war, people worked with what was available, altering uniforms and army tarps or other leftovers, to create civilian clothes.

During the war, the uniform replaced all other suit types, and most tailors—if they stayed in business at all—specialized in its manufacture. After the war, tailors resorted to alterations of uniforms and the reworking of recycled—sometimes fragile—materials into suits which had to be reinforced with buckram, thus creating the so-called starched suit. Men's trousers had very narrow legs all the way to the hem. The trench coat appeared, courtesy of the transition from military into civilian clothes.

The 1920s

During the 1920s the length of a skirt's hem became, for the first time, a serious fashion question. While the clothes of 1920–1921 were still calf length, and (around 1923) even ankle length for a short time, after 1924 women favored skirts that hardly covered the knee. In 1922–1923, fashion was influenced by the discovery of the grave of the Egyptian pharaoh Tutankhamen. Anyone who could afford it, bought a djellaba for a house dress or had their evening dresses decorated with Egyptian ornaments. Otherwise, loose-hanging dresses were characteristic for the time. Mostly they had drop waists and sometimes a pleated hem or *godet* folds which provided freedom of movement. Daytime clothes had high closings, dressed up with baby-doll or men's collars.

Evening clothes and elaborate society toilettes corresponded in cut to daytime clothes. Evening clothes, however, featured generous front and back décolletage, the front décolletage underlaid with a flesh-colored slip. It was not modern to show one's bosom, and breasts were pressed flat with fabric bands. The simple cut of the

evening dress was compensated for by expensive fabrics of lace, gold or silver lamé, loose hanging pearl necklaces, the use of monkey-fur fringe, and extensive embroidery. In 1927, the tendency to lengthen the evening gown's hem set in and the waist returned to its natural place. By 1928 the evening gown was already calf length, while the daytime dress remained knee length until about 1930.

In haute couture, Gabrielle Chanel made her reputation with dresses, jersey suits, and knit jumpers. In 1926 she announced the “little black dress,” a black evening dress impressive for its simple elegance. Like Chanel, Jean Patou favored clear lines and extremely simple elegance, beginning with his own collection for the United States. Jeanne Lanvin, in contrast, presented a decidedly feminine, romantic line. Her *robes de style* (based on historical styles), with their wide paniers, became world famous. Lanvin was also known for her mother-child creations.

Short skirts brought the legs, and thereby rayon stockings, into the picture. Bobs and page-boy haircuts were as typical of the time as were simple, form-fitting toques and cloche hats. Sports became a fashion trend: tennis in a short skirt without stockings, skiing in a Norwegian suit with long knickers, swimming in a one-piece bathing suit without whale-bone reinforcements. The 1920s metropolitan fashion spectrum included the *garçonne* (female boy) in a pants suit with man's hat and even an Eton crop. In the evenings, the *gamin* style featured a smoking (tuxedo jacket), or complete smoking suit, and a monocle. And the *garçonne* also appropriated men's pajamas for household and nighttime wear.

The Exposition International des Arts Décoratifs et Industriels Modernes, held in Paris in 1925, was an epoch making event which later gave the name Art Deco to the period. Among the seventy-two fashion designers, Sonia Delauney created the biggest sensation with her suits and coats in patterns of “simultaneous color contrast.”

After 1924, men's suits had a slightly tapered waist, and the trousers widened slightly. Dandys were recognizable by their extremely broad trousers, known as “Oxford bags,” and by their exaggeratedly pointed winkle pickers or shimmy shoes. For golf, hiking, or hunting, men wore Norfolk jackets and plus fours.

The 1930s

At the beginning of the 1930s, clothing was cut to be form-fitting again, with the waist at its natural place. Bodices, with rubber and stretch reinforcements, hugged the body's curves. Shoulder pads and wide lapels, off-the-shoulder collars with flounces, as well as tight belts, all aimed to make the waist appear slimmer. The hem was lengthened with *godet* folds and pleats from the knee to the calf, providing freedom of movement. Evening gowns were preferably of shimmering satin, and reached to the floor, often with a small “mermaid” train. It was *en vogue* to have plunging back décolletage, with wide crisscross-

ing straps, and a waterfall or sweetheart collar. The success of the new body-conscious line can be traced back to the Parisian designer Madeleine Vionnet and her “invention” of the bias cut, whereby material, cut diagonally to the weave, clung to the body and flared out towards the hem like a bell.

Elsa Schiaparelli was not to be outdone on the idea front. In her collections, she worked with *trompe l'oeil* effects as well as allusions to surrealist artists. Schiaparelli's wide pagoda shoulders, invented in 1933, had a major influence on everyday fashion. Suits, jackets, and dresses after 1933 were unthinkable without padded shoulders.

In the fascist countries (Italy, Spain, and Germany), women's fashion became a matter of political agitation, as exemplified by the introduction of the German Girls Club (BDM, *Bund Deutscher Mädchen*) uniform. Alpine costumes also suited the tastes of National Socialist Germany. The world-famous Berlin manufacturers, which had been over 80 percent in Jewish hands, were, for the most part, ruined (i.e., liquidated) due to the “Aryan cleansing.”

The year 1936 was one of the most innovative in men's fashion. The double-breasted suit, with four buttons instead of six, created a furor, as did patterned shirts worn with gray flannel suits. Shirts also featured the new kent collars and somewhat wider cravattes, tied into windsor knots. In daywear, three-button gabardine suit and oxford shirts with button-down collars were common.

The 1940s

During World War II (1939–1945) and the first years following, fashion was dictated by the need for practical, simple clothes and the rationing of resources and materials. In England the government encouraged “utility clothing.” In Paris, during the German occupation, only very few haute couture houses remained open. In all countries, special magazines and brochures dispensed advice on re-modeling old clothes or how to make new clothes from combining pieces of old ones. Skirts and coats became shorter, suits took on the character of uniforms, and wide shoulders dominated more than ever. Hats and shoes were often hand-made and wool stockings and socks replaced silk. In the United States, Claire McCardell created a furor with her “pop-over” dresses, leotards, and sea-side “diaper suits.”

A new epoch in fashion was marked on February 12, 1947, with the opening of Christian Dior's house. He called his first haute couture collection “Ligne Corolle” (calyx line), but the fashion press called it the “New Look,” because almost everything about it was new. The simple suit jacket, the small lapels, the narrow wasp waist, which emphasized the hips, and, above all, the narrow shoulders. For the first time in over a decade, there were no shoulder pads. Just as new were the extremely wide calf-length skirt, flat broad-rimmed hats (wagon wheels), high-heeled pumps and long gloves, which lent this daytime wear an impressively elegant flair.

At first, due to the lack of necessary materials, the new style could only be produced slowly, but soon countless private seamstresses were busy fulfilling the dream of the “New Look.” In the spring of 1948, Dior's “Ligne Envol” (pencil line) followed, introducing narrow skirts with the famous Dior slit, underlayed with material for walking ease. Nylon stockings were in high demand, leaving shiny rayon and woolen stockings forever in the past.

After the war, a new fashion invention created a lasting impression. On July 5th, in Paris, the French mechanical engineer Louis Réard presented his two-piece bathing suit which he called the bikini. Although there had already been two-piece bathing suits since 1928, Réard's bikini stood out because of its extremely skimpy cut. The bikini, however, was not generally accepted until the late 1960s.

Men's clothing played a rather limited role; uniforms dominated. Trench coats and duffle coats (montys) were all-around coats. The American jazz scene's zoot suit, with its long frock coat and wide trousers, was considered modern.

The 1950s

In the 1950s Paris regained its position as the capital of fashion. Christian Dior dictated the lines—every season he was ready with another: the H-Line of 1954, for example, which rejected the narrow waist for the first time, and the famous A-Line of 1955. Hardly less influential, however, were the designers Pierre Balmain, Jacques Fath, Hubert de Givenchy, Cristobal Balenciaga, and in Italy, Emilio Schuberth and Emilio Pucci. In 1954, Chanel reopened her salon and advertised an instantly famous suit with a loose jacket and slightly flared skirt in direct contrast to Dior's stiffer, more tailored style. In 1957, with Christian Dior's death, Yves Saint Laurent followed in his footsteps. His trapeze, or tent line, wherein he dared to negate the female figure, was a sensational, if controversial, debut success.

Naturally, women had other concerns besides Dior's fashion dictates, but many private seamstresses took cues from one or another haute couture line. The fashion magazines too adapted elite fashions for the average consumer.

The fashion picture at home and abroad was defined by two basic points: the narrow line with its strong body-consciousness and the attention drawn to the hip line by a gathered waistband, and the broad swinging, youthful petticoat. Both tried to create a dreamy wasp waist, magically narrowed by a corset—the *guepière*—or girdle. In addition to suits and jackets, the shirt dress, with its casual, sporty cut, shirt collar, and cuffed sleeves, was a garment suitable for all occasions.

In cocktail dresses, women favored extreme designs like Dior's cupola or Givenchy's balloon look, whose broad skirt was drawn in sharply at the hem. New synthetic materials like nylon, perlon, dralon, trevira, terylene, elastic, and imitation leather fulfilled the dream of

fashion for all. “Drip dry” and “wash and wear” were the magic words of advertising, relegating the iron to the past. For teenage leisure time, there were jeans, capri pants, and ballerina shoes. The childish-cut short night gown with bloomers, called the baby doll, was new. Aggressively intellectual teenagers were attracted to French existentialism and wore black turtlenecks, tight black leather clothes, and black stockings instead of transparent nylons.

Carefully coordinated accessories were a part of stylish every day wear. Shoes with rounded tips and square heels evolved in 1955–1956 to their famously pointy shape and stiletto heels.

German winter sports fashion became an international model. Maria Bogner’s ski pants, “the Bogner’s,” became a household word in the United States, as did the first one-pieced elastic ski overall, invented by Bogner in 1955.

After 1953, Italy, with its body-conscious suits, began to compete with traditional English tailoring. On the whole, men’s fashions were conservative: nylon shirts were snow white and ties narrow. The Hawaiian shirt was a popular leisure garment. The English Teddy Boys, a teenage fringe group, wore frock coat-like jackets and extremely narrow pants; their hair was styled back over their foreheads in a wave with lotion. The toughs, on the other hand, were known by their black leather outfits.

The 1960s

The years from 1959 to 1963 were a transition period from the decidedly lady-like style of the 1950s to the teenage style of the ensuing years. Teenagers favored wide-swinging petticoats while the mature woman chose narrow sheath dresses and, as an afternoon or cocktail dress, an extravagantly layered look, with a tight-fitting skirt layered under a shorter tulip skirt. The real 1960s fashion began in 1964. “Swinging London” became the fashion metropolis of the youth. Mary Quant and her little-girlish thigh-length smock dresses made headlines. Her mini-style was not intended to be elitist, but popular; thus she marketed her own fashion stockings, without which the mini was hardly wearable. The sharply-angled Vidal Sassoon hair style was also new. The counterpart to the Mary Quant look was Barbara Hulanicki’s exotic Biba look from London. Twiggy became the most famous mannequin and the “most expensive beanstalk in the world.” Thinness became, from this point on, a requirement of beauty. In 1964, Rudi Gernreich introduced his topless bathing suit, which corresponded to the tendency towards sexual liberation. He also invented the “no bra” brassiere.

Parisian designers participated in youthful unconventionality and ready-to-wear (*prêt-à-porter*) only reluctantly. Yves Saint Laurent presented clothes with large appliquéd pop-art images in shocking pink, a Mondrian collection with contrasting lines and surfaces, and, in

1966, the transparent look. Paco Rabanne created an uproar with mini sheath dresses of plastic and metal discs and Pierre Cardin’s creations featured round holes, “cut-outs,” as well as molded structures. André Courrège’s fashions were the last word in space-age euphoria. His moon maids with silver sequined stretch pants, white synthetic boots, and white sunglasses with slits for seeing, represented pure futurism. His Courrèges-suit, with its geometrically cut jacket and angled cut-out collar, was all the rage. For all opponents of the mini-skirt, trousers were popular in all imaginable forms and lengths, but jeans above all. Pants suits took the place of the traditional suit. Often a super short mini dress would be worn as a tunic over pants. The width of the trouser leg below the knee grew progressively wider. The wider the “bell,” the more stylish.

For a moment in 1965 it appeared as if the younger generation had said goodbye to the mini skirt, as fashion imitated the film “Dr. Zhivago,” with long coats and Russian caps. The hippie and beatnik looks, protesting consumerism, stood in ideological and stylistic opposition to mainstream fashion, and mixed and matched international peasant costumes, like ponchos, Peruvian hats, Eskimo boots, Indian blouses, and Afghani sheepskin jackets. Young people sewed flowers on jeans, wore floppy hats, or showed their naked bodies, painted only with flowers. Creativity was given free reign, under the motto “hand-made is chic”: T-shirts were batiked or painted, jeans embroidered, caps sewn, leather-fringed belts braided, silver jewelry twined, vests crocheted, pullovers knit, but the hippie style was swiftly co-opted by the market.

Pierre Cardin’s high-necked suits without lapels or collars or with small mandarin collars (or “Nehru”) created a furor and were adopted by the Beatles. More radical were the English mods, for whom parkas and Clark shoes were typical. The Beatles’ “mop top” hair-do became a generational conflict. After 1965, men favored the colorful ethnic hippie look. The turtle neck sweater and later the T-shirt substituted for the shirt.

The 1970s

“Do as you will,” was the fashion motto of the early 1970s. The ideal of the hippies, “we are all equal,” set the tone for unisex and folklore looks. Hand-made was in, from batik shirts, knitted shawls, and crocheted caps, to pullover sweaters of hand-spun sheep’s wool. Understatement was cool and second-hand duds were no longer for the needy alone. The brassiere itself fell victim to the general liberation from all restraints. Feminists spoke of the “liberated bosom.” Directions from high fashion were lacking; even the Parisian designers found themselves in a crisis. Fashion had to be multifarious, uncomplicated, original, and individual, and the hem length varied between mini, midi, and maxi according to whim and mood. Modern romanticism—the nostalgia wave—lent mini-dresses (still fashionable up to 1973), wraparound tops,

wing and flounce sleeves, and bell skirts. Hair was long and softly waved or rolled into corkscrew curls. False eyelashes or painted-on lines magically conjured star-eyes.

Hardly any other fashion created as big a sensation as hot pants in 1971–1972. They were not only worn as super short summer shorts, but also intended for winter with thick wool socks. Hot pants were offset by the beloved maxi coats and high platform shoes. Pants of all kinds provided a relief from the length disputes. There were tight knee-length caddy pants, broad gauchos, knickers, culottes, harem pants, ankle-length drain-pipe trousers, wide Marlene Dietrich trousers, and—still up to 1974—wide bell bottoms. Jeans became the universal clothing, crossing all class and age boundaries. Jackets, pullovers, vests, and T-shirts clung tightly to the body. Pullover sweaters featured witty motifs like trees, houses, or cars. Maxi length party clothes (evening clothes were out) had bold patterns such as Vasarely graphics, pop-art, or Hundertwasser images.

After 1974, a series of looks followed without constituting a single unified style. In 1975 there were caftans and the Chinese look with short quilted jackets. In 1976 the Middle Eastern look dominated, with tunics over harem pants, and, later, the layered look. A master of the folklore mixture was the Japanese designer Kenzo (Takada), whose Parisian boutique “Jungle Jap,” had a decided influence. Mainstream fashion, on the other hand, was rather conservative, featuring the umbrella-pleated (or gored) skirt, which came to just below the knee.

In 1976 the fashion press euphorically reported on Yves Saint Laurent’s collection “Ballets Russes–Opéra.” It was an elegant peasant look with long, wide skirts of shimmering silk and bolero jackets in unexpected color combinations like red, lilac, orange, and pink, delicate sheer blouses with wide sleeves, and golden turbans.

Beginning in 1977, punk clothing exerted a strong influence on fashion for the next few years. The anti-bourgeois, “no-future” generation shocked with their brutal look: safety pins through cheeks and ear lobes, dog collars and razor blades as necklaces, diabolically made-up eyes, black lips, ripped jeans and T-shirts, torn fish-net stockings, and tough Doc Marten’s boots. Their hair, in contrast to their gray and black get-ups, differentiated itself from the mainstream “normals” by its green and red highlights and its spiked (mohawk) styling. Insiders met at Vivienne Westwood and Malcolm McLaren’s shop on King’s Road, called “Sex” in 1974 and then, later, “Seditionaries” in 1978.

In 1978, the Parisian prêt-à-porter designers, above all Claude Montana, brought the military and punk look onto the runway. Broad “power” shoulders and oversized garments initiated a new fashion silhouette which would become the characteristic style of the 1980s.

The 1975 American book, *Dress for Success* by John T. Molloy, gave the exile from hippie culture tips on how to market himself with the right clothes, on the power of

the white shirt, on how to interpret the codes of tie patterns, and how make it in “big business.” Two years later, in 1977, Molloy’s sequel followed, *The Woman’s Dress for Success Book*.

The 1980s

The fashion silhouette of the 1980s was defined by oversized, voluminous gigot (leg of mutton) sleeves and wide padded shoulders which coincided with the fight for women’s equal rights. Even eveningwear, which emphasized low-cut necklines and narrow waists, had to have padded shoulders. Hemlines were no longer an issue. Teenagers wore loose mini dresses, but in general skirts extended from below the knee to calf-length. Women wore masculine jackets, short bell-hop jackets or broad-shouldered, box jackets with pants. At the same time, fashion became a sign of prestige and a status symbol, best represented by brand-name labels, and a preference for leather, fur, and gold-colored accessories.

The Japanese avant-garde designers, who attracted a good deal of attention in Europe during the 1980s, stood in sharp contrast to this trend. In the tradition of Japanese clothing, Yohji Yamamoto draped skeins of fabric loosely around the body. In 1981, Rei Kawakubo’s fashion company “Comme des Garçons,” called the entire Western fashion aesthetic into question. She shredded skirts into fluttering strips, tore material, knotted it together, and layered it crosswise. Black and gray dominated. Issey Miyake was known for his highly experimental use of materials and methods, demonstrated by his rattan bodices inspired by Samurai practice armor in 1982, and his first “Pleats Please” collection of 1989.

In 1983, Karl Lagerfeld became the designer for the haute couture house of Chanel. He reworked the legendary Chanel suit to be new and uncomplicated, and added leather skirts and pants suits. Parisian designers offered a new body consciousness as an alternative to the oversized craze. Thierry Mugler sparkled with corset suits and siren clothes, Jean-Paul Gaultier with skin-tight velvet and grenade bosoms, and Azzedine Alaïa with clinging lace-up clothes.

The American designer style became synonymous with sportswear and clean chic. Ralph Lauren gave tradition a modern face lift with his “country-style” concept. Donna Karan was treasured for her functional “all-day fashion” with jersey bodysuits instead of blouses. Calvin Klein was considered the inventor of designer jeans.

The music scene provided more and more style models. Pop icon Madonna was fascinating as a contemporary Marilyn Monroe. Her appearance in a corset was the impetus of the underwear-as-outerwear craze, featuring bustiers and corsets.

The fitness craze exerted the greatest influence on everyday fashion in the late 1980s. The ballet dancer’s leg warmers, the aerobic fan’s leggings, and the bicycle racer’s pants appeared in everyday fashion. Leggings

available in the wildest patterns, the most garish colors, and the shiniest stretchy fabrics, were worn with blazers or long pullover sweaters.

Towards the end of the decade, the long blazer with straight, knee-length skirt and black opaque stockings became the classic women's business outfit. Evening fashion, and the revival of the cocktail dress, was, in contrast, emphatically feminine. Christian Lacroix, whose first haute couture show in 1987 brought a frenzy of color, became the master of cocktail dresses with jaunty, short tutus and balloon skirts.

In response to massive animal rights' campaigns, the wearing of fur became a "question of conscience," making colorful fake furs and quilted down coats fashionable.

Yohji Yamamoto's new men's fashion, with its flowing, collarless jackets, proffered an alternative to the yuppie's conventional shoulder-padded business suit. Giorgio Armani led the rise of Milan menswear, and the German manufacturer, Boss, achieved international recognition for its men's fashions.

In 1982 Calvin Klein revolutionized men's underwear, making simple ribbed men's briefs a designer item by printing his name in the elastic waistband. In 1985, androgyny became a provocative fashion statement; Jean-Paul Gaultier created skirts for the body-conscious man.

The 1990s

Fashion became a question of "which designer?" with extremely varied styles. In the early 1990s, the Belgian designers Anne Demeulemeester and Martin Margiela started a new style direction with the advent of the grunge and poor-boy look, making Antwerp, which housed designers Dries Van Noten, Dirk Bikkembergs, and Walter Van Beirendock as well, the new fashion center. The English designer Vivienne Westwood finally received international recognition for her daring reinterpretations of historical styles. London newcomers John Galiano and Alexander McQueen established themselves as chief designers at, respectively, Christian Dior and Givenchy in Paris. Jean-Paul Gaultier continued to be very successful with his underwear fashions, particularly with Madonna at its center. The fashion palette of the Italian designer Gianni Versace spanned from neo-baroque patterns to bondage style, while the house of Gucci, under the direction of the Texan Tom Ford, combined purism and eroticism. Miuccia Prada caught on, with her "bad taste" style, and a successful re-launching of past styles. Giorgio Armani remained the master of purism, while Dolce & Gabbana celebrated women's eroticism with black lingerie and animal prints. Jill Sanders, of Hamburg, perfected her minimalism to international acclaim. The Austrian designer Helmut Lang established himself in New York; his transparent layer look and his minimalist lines gave new stimulus to fashion. Alongside the designers, supermodels, like Claudia Schiffer, Naomi Campbell, Linda Evangelista, and Cindy Crawford, were central to all fashion events.

In everyday fashion, leggings, in all colors and patterns, dominated at the beginning of the decade. Worn under stylishly transparent, calf-length skirts and long blazers in multi-colored blockings, leggings covered the legs discretely. The transparent look appeared somewhat in mainstream fashion, layered over lace bodysuits, bustiers, and bras. Towards the end of the decade, crinkled shirts, ragged hems, and inside-out seams were accepted. The baguette bag, publicized by Fendi, brought the handbag, after two decades of backpacks, into fashion's center stage.

The marketing of brand names became increasingly important: adults favoring Louis Vuitton, Hermes, or Escada, and teenagers of both sexes favoring sportswear brands like Diesel, Chiemsee, Burton, Nike, Adidas, or Levis. The Italian fashion manufacturer Benetton stimulated heated controversies over its advertising.

Men's fashion was also increasingly determined by designers with clearly differentiated styles, ranging from Giorgio Armani's loosely cut suits to Helmut Lang's body-conscious, relatively high-necked suits and narrow trousers with a satin band on their outward-facing leg seams. Baggy pants and extra-large shirts remained popular with the younger generation. Cargo pants were introduced in 1999 as sportswear.

See also Armani, Giorgio; Art Nouveau and Art Deco; Cardin, Pierre; Chanel, Gabrielle (Coco); Corset; Dior, Christian; Europe and America: History of Dress (400–1900 C.E.); Gaultier, Jean-Paul; Haute Couture; Lagerfeld, Karl; Lang, Helmut; Patou, Jean; Poiret, Paul; Quant, Mary; Saint Laurent, Yves; Suit, Business; Youthquake Fashions.

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Ingrid Loschek

TWIGGY In 1949 Lesley Hornby, later rechristened “Twiggy,” was born in Neasden, an unfashionable suburb in North London, where she grew up. Only sixteen when she began modeling in 1966, she introduced the cult of the “celebrity model” and left an indelible legacy in other, more significant ways. Models in the 1950s, in both America and Britain, were styled and made up to look mature, sophisticated, and “ladylike,” to complement the fashionable clothes of the time. In England many were young women from respectable families who had followed a modeling course at Lucie Clayton’s Mod-

eling and Grooming School in Mayfair. In America, such top models as Suzy Parker were also well-groomed girls from middle-class backgrounds. New photographic techniques allowed mass-circulation newspapers and magazines to print high-fashion images, and the models’ names soon became familiar to the public.

The social and demographic changes that followed created need for new designs and new models. Mary Quant’s clothes for *Bazaar* were aimed at a young clientele, while the early 1960s saw the opening of innumerable boutiques in London, which, unlike Quant’s shop,



Twiggy. Unlike the feminine and sophisticated looks of models in the 1950s, Twiggy became the celebrity model who typified the new, young, and boyish style of the 1960s. © HULTON-DEUTSCH COLLECTION/CORBIS. REPRODUCED BY PERMISSION.

were intended for girls of far more limited means. The first model whose image reflected this climate was Jean Shrimpton. Although she had attended Miss Clayton's school, her success was a result of the partnership she had formed with the working-class photographer David Bailey. The early pictures, which made them both famous, showed off her youth and her tomboy persona.

Lesley Hornby was working as a hairdresser in a salon near her home when an older man recognized the way in which she might personify the new London. Nigel Davies, a former boxer and stallholder, who called himself "Justin de Villeneuve," changed her name and transformed her appearance; it was at his suggestion that she painted on eyelashes under her eyes so as to resemble a porcelain doll and had her hair cut short. The photographer Barry Lategan took a picture for the salon, and, by chance, the fashion editor Deirdre McSharry saw it. In the February 1966 issue of the *Daily Express*, she used a center spread to portray this "Cockney Kid" as "the Face of '66." One of the shots showed Twiggy wearing homemade trousers and sweater, which accentuated both her androgynous appearance and her democratic appeal.

She was smaller than most models and invariably posed so as to emphasize her childlike qualities. In 1967 she was photographed for British *Vogue* by Ronald Traeger, who portrayed her riding a miniature bike in knee-high socks. Cecil Beaton sat her on a high shelf, and Helmut Newton asked her to jump toward the camera with arms outstretched. There followed a shoot with

Richard Avedon and a cover for American *Vogue* in August of that year. At one point she was on twelve covers simultaneously; as a model, she was used by both traditional "glossies" and new, youth-oriented publications.

Although the syndication of her name to dresses, dolls, and other merchandise meant that she could retire from modeling by 1969 to pursue a career as actress and singer, she had permanently changed magazine culture. Now, to the deification of youth was added the idea of instant fame, the notion that class barriers that could be painlessly transcended, and the problematic pursuit of a pre-pubescent ideal of beauty.

See also **Fashion Photography; Fashion Magazines; London Fashion; Quant, Mary.**

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