

A TALE OF TWO CLOTHS: THE TRANSITION FROM WOOL TO COTTON UNDERGARMENTS IN ENGLAND DURING THE VICTORIAN AGE

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The trendy and fashion conscious have been dismissed as inconsequential—at best cute and at worst useless—in the eyes of history. Fashion and dress, after all, are not vital when compared with wars, political instability, or dramatic economic changes. It is not surprising, therefore, that fashion's alliance with cotton in the Industrial Revolution has been overlooked. Cotton's replacement of wool as the primary material of the English textile industry would not have been possible without the demands of the fashionable elite during the nineteenth century.

The shift in fabric popularity hardly commanded the attention of the world, even though it still affects the world today. Even fashion and economic historians do not spend a great deal of time discussing the change. They are likely to explain in passing that the cause was multi-faceted, combining politics, health, and economics. There was little understanding of the health needs of the body during the Victorian Age (although there were some great improvements) and politics were not a factor after the Manchester Act. Above all, none of those three categories explain why cotton, a difficult plant to cultivate, surpassed the patriotic wool.

The missing pieces of the “why” behind the shift from wool to cotton lies in the efforts of the fashion beaus, dandies and ladies of the Victorian Era. It was the prudish middle class that selected cotton as the fiber of choice. Cotton was a brilliant, foreign fiber that could be woven into thick, soft, towels or nearly sheer, silky, cloth. Cotton's versatility for clothing or housewares was second to the ability to hold brighter colors longer than wool or other materials. Cotton did not gain popularity, particularly in the domain of underwear, until the upper and middle classes decided that it was chic. Although in the modern day, underwear is not heavily considered, the focus on underwear is necessary to establish the importance of the link between fashion and cotton's popularity. During the nineteenth century, underwear was the only aspect of fashion to go through serious

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changes. Custom and fashion are two terms that are often at ends with one another. Custom has years or generations of support for it; fashion, however, is sporadic and is marked by periods of restlessness and change.¹ This would also be an accurate way of describing the Industrial Age. What is unusual about the clothing of the Industrial Age is that instead of moving against former ideas of modesty as fashion is apt to do, the fashions went so far as to define modesty.² A narrow waist with fuller hips was the order of the day, even though the bosom had been the focus during the Napoleonic Era. This new style was called the bell silhouette.

The introduction of the bell silhouette into fashion during the Victorian age meant a staggering amount of underclothing for women. The difference in underwear and underclothing is essential: underclothing is a garment worn under the outer, and underwear is an article of clothing which prevents chaffing, absorbs perspiration, and stops the outerwear from slipping.³ The amount of underclothing required for a proper woman at the time led one writer to say: “[a lady's] underclothing had become, as it were, an integral part of her personality.”⁴ As the Industrial Revolution picked up steam, the middle class's ranks swelled, as did the trend toward prudishness.⁵ It was no longer proper for women to be seen without the armor of undergarments to protect her virtue and to appease Mrs. Grundy.⁶

A wealthy woman wore seven separate pieces of flannel or silk undergarments. She would start her day by putting on her chemise, an unshaped garment of varying length with a low square neckline, possibly with narrow frills. While these garments were normally homemade, they were available through stores by 1850. This was later replaced by a cotton bodysuit called the combination.⁷

The next step was the petticoat, the long for winter and the short for summer. A long petticoat had an attached bodice, buttoned at the back and a drawstring neckline. A short petticoat tied at the waist. Around the hem of the petticoat was the only location where decoration, simple embroidery, was considered acceptable throughout

¹ Paul H. Nystrom, *Economics of Fashion*, (New York: Ronald Press Company, 1928), 139.

² *Ibid.*, 142.

³ Lawrence Langer, *The Importance of Wearing Clothes*, (New York: Hastings House Publishers 1959); Revised by Julian Robinson, (Los Angeles: Elysium Growth Press, 1991), 74.

⁴ Phillis Cunnington and C. Willett, *The History of Underclothes*, (London: Faber and Faber Limited, 1981), 77.

⁵ *Ibid.*, 76.

⁶ Mrs. Grundy first appeared in “Seed the Plough” by Thomas Morton in 1800. By 1830 she had become a mythical figure who watched over proper dress.

⁷ Cunnington and Willett, *The History of Underclothes*, 79.

the whole of a woman's undergarments. A woman would wear four to six of these, one on top of the other, depending on the season, to lay the foundations of the bell shape.⁸ Following the petticoats was the crinoline, also known as the horsehair petticoat. Made with horsehair and a stiff woolen fabric called weft, it ended at the knee with some measuring six feet in diameter. This petticoat needed to be made stronger; it was the key to achieving the bell shape until the steel crinoline cage.

After the crinoline was the drawers, which achieved acceptability for women by 1843, after years of being considered a male-only garment. Drawers were the first real example of underwear. A simple pantied garment that went to the knees, drawers had a drawstring waist with a front closer of three to four buttons.⁹ Drawers began in France where they were called pantaloons. While women there were wearing them as early as 1800, they were not really accepted until Princess Charlotte wore them in 1811. Proper English women did not wear them except when riding until 1843.¹⁰ Doctors approved overwhelmingly of drawers, proclaiming them as extremely sanitary. The Handbook of the Toilet, the guidebook for all things dealing with undergarments and private functions, said in 1843, "Drawers are of incalculable advantage to women who expose themselves to a variety of diseases from the usual form of their clothes."¹¹ Previous to the acceptance of drawers, women wore nothing under their multiple petticoats which would have allowed easy access to the genitals, a favored location for any type of disease.

Despite the praise drawers received for the sanitary benefit to both sexes, drawers were eventually replaced by the combination. The combination was a cotton body suit which buttoned down the front and at the crotch. It was accepted by 1883 along with the sanitary corset, a rubber and cotton creation which molded to a woman's form and did not require tight lacing.¹²

The final stage took the longest and remains to this day the most infamous: the corset. By the 1850s, the corset had been expanded to cover the shoulders and the hips of a woman (pregnancy was not an excuse for neglecting a corset).¹³ It would take nearly a quarter of an hour to put a corset on, and it would take three pulls. A woman would grip the edge of something, take a deep breath, and another woman would pull the strings as tight as she could. There would be a small

⁸ Ibid.

⁹ Ibid., 32.

¹⁰ Ibid.

¹¹ Ibid., 95.

¹² Ibid., 96.

¹³ Alison Carter, *Underwear: A Fashion History*, (New York: Drama Book Publishers, 1992), 42.

break to let the woman breathe before the procedure was repeated twice more.¹⁴ Ideally, a woman's waist would be drawn in about fourteen inches, creating a stiff walk and preventing a woman from sitting or breathing properly. One nobleman noted that when his daughter had bent to pick up something, her lacings had burst with such a racket that "the house worried she had exploded."¹⁵ The corset was normally made of linen or silk with first whale bones, then spring steel, forcing the female body into the desired shape. The eyeholes for the laces were reinforced with steel to prevent a woman's movement from tearing the fabric. As the incident with the girl bending down and bursting her corset shows, however, it did not always solve the problem.

Tight lacing was frowned upon by doctors for the strain it placed on the ribs and organs. When doctors began noticing the shocking number of miscarriages caused by the pressure put on the hips by the corset, the outcry against them grew.¹⁶ In compromise, the fashion world did two things: created an elastic bottomed corset that stretched over the stomach of a pregnant woman, and demanded the expanding of the skirts which helped create the illusion of a tiny waist without such tight-lacing.¹⁷ Men in the world of medicine were not the only ones concerned with the unhealthy nature of corsets; husbands and fathers were too. Women, not men, demanded the corset. It was believed that a girl would not develop good posture unless she wore one, which resulted in the creation of night corsets so that a girl's spine would theoretically form properly.¹⁸ Many men confessed confusion about why they were supposed to find "a waist like an ant to be attractive."¹⁹ There are several records of husbands requesting that wives abandon tight lacing, due to health reasons and because many husbands simply did not like the look. When the crinoline cage widened skirts to such a diameter that a normal waist looked slimmer, many women gratefully loosened the corset, although it was not abandoned altogether.²⁰

The startling amount of underclothing that was worn during the Victorian age was the direct result of prudishness following the increase in the middle class's numbers. By the 1850s, fifteen percent of the population in England belonged to the middle class.²¹ Certain

¹⁴ Ibid., 80.

¹⁵ Ibid.

¹⁶ Ibid., 81.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid., 77.

²⁰ Carter, *Underwear: A Fashion History*, 40.

²¹ Sally Mitchell, *Daily Life in Victorian England*, (Westport: Greenwood Press, 1996), 130.

characteristics defined the middle class: untitled, highly educated, piety and prudishness. In many ways, the middle class of the Victorian Age was a marvel of humanity for taking prudity to the point of eroticism.²² The color white and virginity were more closely associated with each other and with constant repetition; eventually it became what was attractive at the time.²³

The previous decades had been a witness to the lax morality due to wartime. Fashion focused on illuminating the human figure, but paid particular attention to feminine curves. Loose, flowing garments with the high Empire waistline²⁴ allowed women to dress in the barest of underclothing. Some of the more daring, or scandalous, women abandoned the corset completely.²⁵ When the war was over, such dress was no longer acceptable, resulting in the astonishing levels of underclothing.

Not only did the number of required items for a proper young woman increase, but their appearance was strictly regulated in the eyes of society. Clothing, in particular the petticoat, was a sign of wealth and prestige in the nineteenth century.²⁶ Until the end of the Victorian era the only color that was available – for proper people – was white. The evening petticoat's hem, as stated before, was the only place on underclothing that was considered acceptable to decorate. In the 1870s, however, while the exterior of clothing was drabber with the increased popularity of the black suit, underclothing became colored. Wearing colored undergarments became a sign of success and class since dyed items were more expensive.²⁷ Cotton's popularity would increase enormously during this time.

The most common explanation for the popularity of cotton is price; it was cheaper than wool and therefore took control. If price was all that mattered, however, the lower classes, not the middle, would have been the first to use the fabric. Cotton would have been regulated down to a "worker" fabric, and considered unseemly for the image conscious wealthy to wear.

The lower class could not wear clothing that matched the style, demands, or even the materials of the middle class. Working class

families made under £300 a year,²⁸ and a well-to-do person of the lower classes made only twenty seven shillings a week.²⁹ The first thing a worker's salary went to was rent and food. A working class family of seven's weekly budget in Lancaster allocated for rent of a two story home at three shillings and six pence, and food totaling about thirteen shillings and one and a half pence for food for a week. After schooling for two children to learn to read, a bucket of coal for heat, and soap and candles, there was a surplus of six shillings and eleven pence.³⁰ Clothing and alcohol were not considered in this budget and the surplus is not enough to purchase clothing yearly for the family. The cloth would have to be purchased and the clothing made at home by the mother. It was not until the late 1880s that clothing began being sent pre-made into stores, and it was later still until such clothing became truly affordable for the laborer unless it was through second or third hand shops.³¹

Fabrics such as fustian, a tough denim-like material, corduroy and low grade flannel were "worker's fabrics." Moleskin, a fabric made by combining corduroy and woolen linen, became the most popular and common "worker's fabric".³² Even with these cheaper fabrics, however, the estimated cost of clothing an average family, two parents and eight children, near London was £12 a year: families had only one set of clothing per member for daily wear and another for "Sunday best."³³ Cotton was cheaper to manufacture than wool, but since the lower class was not the one wearing it regularly, price fails to explain cotton's popularity.

Health is another common explanation for the switch from woolen cloth to cotton, particularly in the case of underwear. There is no solid evidence, however, that doctors were aware of the health benefits of cotton's wicking property. The wicking property refers to a fabric's ability to hold or dispel water. Doctors preached the wonders of wool even after its dominance was fading. Cotton, according to them, was a substandard cloth that would not allow the body to retain heat and result in more sickness. Most doctors viewed cotton as an inferior fabric to wool, but acceptable if it was loosely woven into a towel.³⁴ Heat retention is an important aspect of outerwear, but underwear has different demands. For once, fashion and health

²² Cunnington and Willett, *The History of Underclothes*, 96.

²³ Ibid.

²⁴ This became popular again in Europe by Empress Josephine to hide her pregnancy.

²⁵ Cunnington and Willett, *The History of Underclothes*, 37.

²⁶ Nystrom, *Economics of Fashion*, 151.

²⁷ Diana De Marly, *Working Dress: A History of Occupational Clothing*, (New York: Holmes and Meier Publishers), 111.

²⁸ Cowell, *Factory Commission Report* (1833); Cited in Edgar R. Pike, *Human Documents of the Industrial Revolution in Britain*, (London: George Allen and Unwin, 1966), 53.

²⁹ Ibid.

³⁰ Ibid.

³¹ Carter, *Underwear: the Fashion History*, 45.

³² Ibid., 80.

³³ Ibid., 79.

³⁴ Ibid., 511.

combined to negate medical arguments for wool, and cotton rose to power as king.

As an animal fiber, wool was meant to protect from weather, so when it gets wet wool will actually bond tighter to itself to protect the skin.³⁵ This would eventually cause shrinking and tightening of the clothing rather unpredictably if the article was not allowed to fully dry. The most important aspect to the fashion world was not if the clothing would shrink or what the market for it was; the most important thing was if it could retain a dye. Wool, like human hair, loses the ability to retain a pigment over time. Additionally, wool has a tendency to yellow after being exposed to the sunlight.³⁶ This, more than anything else, insured wool's fall from dominance.

To doctors however, there was no finer fiber to wear than wool. Porous and hygroscopic, it conducts heat poorly and while it absorbs water, it does not release it quickly. Water and air cause evaporation and heat. By trapping this evaporation close to the skin the body stays warmer. In the chilly English climate, this would be vital. In 1841, the initial thought of women's poor health was because of too much exposure of the skin to cold and doctors told women to wrap themselves in wool flannel bodysuits.³⁷

While doctors made an excellent point about wool's ability to keep someone warm, a fabric which retains water for long periods of time is not a good idea to keep around the genitals for either sex, but specifically for women. Moisture kept near the genitals leads to yeast infections or other forms of vaginal disease. In an area which is already kept moist and warm by the body, adding more moisture meant bacteria could grow. While regular bathing was strongly recommended, most doctors agreed that drawers and combination suits needed only to be washed once a week.³⁸ This, however, did not help the lower class who could not bath daily or wash their clothes weekly.

Unlike wool, cotton "breathes". This "breathing" effect is caused by the fact that cotton is quick to release moisture, which means bacteria have a more difficult time lingering. This also means that cotton does not retain heat very well, the main reason why doctors were so adamantly against it to begin with. For the purpose of underwear, however, it is much healthier to have cotton than wool or even silk. While there is no strict evidence that doctors and the public

³⁵ George Vivian Poore, "Clothing," *A Treatise on Hygiene and Public Health*, eds. Thomas Stevenson and Shirley F. Murphy, (Philadelphia: P. Blakiston and Co. 1892), 510.

³⁶ Howard L. Needles, *Textile Fibers, Dyes, Finishes, and Processes: A Concise Guide*, (New Jersey: Noyes Publications, 1986), 63.

³⁷ Cunnington and Willett, *The History of Underclothes*, 86.

³⁸ Poore, "Clothing," 520.

were fully aware of this, around the 1880s, the sanitary corset and combination suit were advertising that it was safer and healthier for the body because it was made of cotton and had button openings at the crotch.³⁹

Cotton's struggle for medical support was simple compared to the political sphere. Britain's empire served not only as a source for raw materials, but it also established more markets for the finished product. Cotton was a foreign material that pushed the domestic product to the side. This was an anomaly for the world.

For centuries, Britain had been the leading manufacturer of wool products. Cost was minimal, jobs were ample for the populace, and there was a sense of pride in the international market. Not only was it patriotic, but wool, in comparison to cotton, was easy to manufacture. After being sheared from the sheep, it was washed and then carded to remove impurities. The carded wool was spun into yarn on a spinning wheel; the make-up of wool makes it very easy to spin into yarn. Woolen fibers run parallel to each other in a single direction, which meant less snarls and breaking while spinning.⁴⁰ The yarn was turned over to a weaver and woven into a variety of cloths. This process was perfect for the cottage industry; a whole village could be dedicated to shearing, carding, or spinning for one weaver. This meant that whole villages could be invested to produce wool thread cheaply for factories.

The Enclosure Act, which reverted broad amounts of farmland into private holdings under the pretense of efficiency, had very little effect on wool's popularity. The shift from the cottage industry to the mill system, the eventual result of the Enclosure Act, did, however. The mill system allowed an increase in fabric availability, lowered costs, and created a larger market for wool. The availability of wool on the British Isles was soon surpassed by the demand for it as a cloth, and England had to purchase wool from its colonies, mainly Australia.⁴¹ Even with the decrease in price, wool still failed to retain the interest of the wealthy. It did not have the same mystery and class status as cotton.

Cotton, called the vegetable lamb in ancient times, is not only a finicky plant to grow, but also a difficult cloth to prepare. The fluffy white boll is meant to protect the seeds inside, but the seeds need to be removed for cloth. This was done by hand until the cotton gin was invented. Quality of cotton was decided on by how long a thread could

³⁹ Cunnington and Willett, *The History of Underclothes*, 85.

⁴⁰ Poore, "Clothing," 510.

⁴¹A. Barnard, "Wool Buying in the Nineteenth Century: A Case History," *Yorkshire Bulletin of Economic and Social Research* 8 no. 1 (1956), 3.

be produced after ginning; generally, the longer a thread, the finer the cotton.⁴²

Cotton was a popular fabric in India, Egypt, South America, and China before colonization occurred. The cotton fabric was brought over to the Middle East, who traded it with Italy and then with Spain. The first appearance of cotton in England occurs in the Bolten Abbey inventory of candle wicks around 1200.⁴³ There was not a lot of bother about it outside of candlewicks, embroidery threads, and occasional mention as lining for doublets. During this time, England was busy trying to get Flemish weavers to increase the wool trade. These same weavers, however, may have stimulated the cotton production as well.⁴⁴ England would continue to purchase cotton from Germany, the leader of cotton in Europe at the time, until the 1600s when the East India Trading Company officially opened to sell off surplus wool. In the later part of the century and into the next, cotton printing plants would open across England for the new Indian cotton cloth that was being brought in.⁴⁵

The trendy new cloth from India was immediately grabbed up by the wealthy to such a degree that wool manufacturers demanded that Parliament do something to stem the tide. In 1666, Parliament passed an act that said all of England's dead had to be wrapped in wool or a small fine would be levied. In 1700, another act was passed which outlawed Indian silks and calicos for clothing or housewares at a fine of £200 to the wearer. Despite this, by 1708, upper class women were willing to risk getting caught for the ability to wear Indian cotton. Finally, in 1736, Parliament passed the Manchester Act, which forbade all Indian cloth goods inside England and allowed the creation of cotton and wool mixed calicos.⁴⁶ The act failed to stop the trend of cotton; it gave Lancashire, which purchased cotton from the future United States, a monopoly on the printing, manufacturing, and sale of cotton cloth.⁴⁷ Though the monopoly on printed fabrics was a marginal achievement at first, as the middle class's strict thoughts of prudishness vanished and colored underclothes and underwear were acceptable, it grew into a solid investment. Cotton's inception as the most popular fabric in the modern world has been

⁴² Ibid.

⁴³ James A.B. Scherer, *Cotton as a World Power: A Study in the Economic Interpretation of History*, (New York: Fredrick A. Stokes Company Publishers, 1916), 44.

⁴⁴ M.D.C Crawford, *The Heritage of Cotton: the Fibre of Two Worlds and Many Ages*, (New York: G.P. Putnam's Sons the Knickerbocker Press, 1924), 91.

⁴⁵ Ibid., 86.

⁴⁶ Ibid.

⁴⁷ Ibid.

passed off as economic. It has largely been accepted as simply a natural progression of the inventions and advancements of the nineteenth century. Another argument is that cotton's supremacy was linked with colonialism and the source for raw materials, and therefore is more politically linked. Without the elite demanding more cotton, which led to the invention of products which eased the manufacture, wool may have continued to be the most used fabric. While there exists no solid evidence that the healthy effects of cotton were realized at the first stages of its popularity, without the continued pressure and efforts of the wealthy individuals of England's wealthy and sociable, the healthy properties may never even have been analyzed by doctors. Cotton's growth is linked with the middle class's wealth and desire to display that wealth through foreign items placed on display.