

Today, there is an emphasized concern on the quality of fabrics, as it relates to the longevity of clothing it is used to create. This is not a new issue, the Victorian era was fraught with spontaneously combusting silk, and the early 20th century saw the birth of synthetic fabrics which are known to put extreme stress on the environment. I studied over 100 clothing items ranging from 1900 to 1950 to get a better understanding of trends in textile quality, and how it may relate to our relationship with clothing today.

An Examination of Textile Quality C. 1900-1950

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CONTENTS

Introduction.....	2
Early fashion plates.....	4
Methods	5
Data	5
Analysis.....	9
Discussion	9
Limitations	10
Literature cited	10

INTRODUCTION

Fast fashion and how we interact with our clothes has been something of a hot topic in recent years. It is becoming more commonplace to think about where our clothes are coming from and what they are made of. But fast fashion isn't new, it has its roots in the Victorian era. Some of its aspects can be traced back even further. Some of the first shops selling readymade garments date back as early as 1824 (Godley 2013). The resounding boom of the fashion industry did not take off with the sewing machine, as most may believe, and can actually be attributed to the development of standardized sizes. Originating as far back as the 17th century, standardized sizing allowed the model of ready-made garments to flourish. This began with simple garments like hosiery and smocks. These were not closely fitted to the body, thus having a certain amount of forgiveness when it came to early standardized sizing.

Fast fashion today can be defined as the constant cycling of new, trendy, and cheap garments (Gecseg). Nowadays, fast moving trends can be attributed largely to social media. Influencers are a prime marketing strategy by manufacturers, and there is always an emphasis on what is new. We often think of it as a modern issue, something that started in the 90's or 80's at the earliest. Some of these developments that we think of as fast fashion are relatively modern, brands like the Gap, H&M, Zara, and Primark found success in the late 70s to early 80s by using the fast fashion model to keep customers coming back to buy more (Rudolph). The 90s saw the phrase fast fashion become a common place term in media outlets such as the New York times, and by 2005, fast fashion brands offered the first real competition luxury brands like Dior and Chanel had ever seen.

However, The speeding up and eventual competition between different modes of fashion did not happen overnight or even over the course of just a few decades, and just like the concept of fast fashion, the logistical processes to make these models work can also be traced back past the Victorian era. The Georgian Era (1714-1832) used fashion plates as a means of marketing and documenting fashion trends for the general public. These were engraved pocketbooks, detailing the most popular dresses, colors, and accessories, as well as the nobility who wore them (Figure 1.1). Initially they were published yearly, but by the regency era (1811-1820), the plates came out monthly alongside newspaper articles on important season events, and fashion specific magazines (Banner).

By the 18th century, the clothing industry was established enough to show a cycle of fast-moving trends, largely when it came to accessories such as shifts, frills, caps, and skirts. Small, mass-produced items that are easily replaced, both by the customer and the seller. The 19th century exacerbated these practices in a number of ways. This time period was the height of the industrial revolution; steam powered machinery not only sped up the production process, but also

advertised trends and shipped items far faster. By the mid to late 19th century, trends changed year to year, and they often changed so drastically that old dresses could not be remade with a more up to date silhouette in mind.

This mindset of always wanting something new can be reflected in the quality of garments at the time, a prime example being weighted silks. When artificial dyes came along as early as 1849, most pigments used a compound referred to as “sugar of lead.” The chemical could be used on any color of fabric, rather than just darker colored silks, which had been the case during the era of natural dyes. Most importantly, manufacturers found that it could be used to make silks anywhere from 100% to 300% their original weight (Rudolph). This cheapened the silks in more ways than one. The small metal pieces artificially weighting these silks often resulted in a process called ‘shattering silk’, which is the cracking a splitting of fabric along seams and folds. Shattering occurs on most antique garments in varying amounts, but on very heavily weighted silks it could occur almost immediately. The second and far more worrisome side effect of the heavily processed silks was that of spontaneous combustion. There comes a point in the chemical treatment of silk where the quantity of lead can be harmful to the structural integrity of the garment, and if a sudden shift in humidity, oxygen levels, or heat were to occur, the silk was liable to catch fire.

Despite these alarming qualities, customers remained unbothered in many cases, and often preferred the heavy weighted silk. The ability to cheat the quality of silk to this extent when combined with the speeding up of the fashion cycle and emergence of the working class amid the industrial revolution resulted in some of the roots of fast fashion today. Weighted silk was crisp, defined in color, and most importantly, cheap. Fashions were changing yearly, often so drastically that it wasn’t enough to simply change accessories or trimmings to keep up. Entirely new sets of clothes were needed, and bad quality silk that practically disintegrated by the end of a single season made the process of buying new that much easier.

Through hundreds of years, humans shift through hundreds, if not thousands of styles of dress. This not only includes silhouette, but also fabric type, color choice and availability, while factoring the birth of the electric sewing machine, the working class, and standardized sizing. Thus, we are left with a question, What kinds of physical changes occurred in our clothing during this process vastly complex process of speeding up the fashion cycle, and how do they provide more context to the relationship we has humans have with our clothing?

For the purposes of this research project, we will examine the presence of synthetic fabrics between 1900 and 1950, shortly after weighted silks begin to fall out of fashion.



Figure 1. Women 1827-1829, plate 037. Gift from Woodman Thompson, Fashion plates 1729-1929

METHODS

For the sake of having a workable sample, garments produced in the years between 1900 and 1950 were examined. This was done by recording the year, garment type, materials used, and any other notable information available in the online collections of clothing from the Museum of F.I.T. (Fashion institute of technology).

DATA

Year	Garment Type	Materials Used	Other Notes
1900	Evening gown	Light colored Silk, Satin Damask	France, House of Worth
1900	Tea Gown	Off white silk, crimped chiffon with red and green carnation print, china silk and lace	France
1900	Lingerie Dress	Light color cotton and lace	France
1900	Corset cover	White cotton and lace	USA
1900	Maternity corset	light colored cotton	USA
1900	Combinations	Lightly colored cotton, lace, and silk ribbon	USA
1900	Corset	Black Cotton Sateen, pink satin, black lace	USA
1900	Evening cape	Green Silk satin, ceramic buttons	England
1900	Man's military jacket	Wool and Sateen dark color	USA
1902	Afternoon Dress	Dark colored point d'esprit, silk taffeta, grosgrain ribbon, lace	France
1903	Dress	Black silk satin and cream lace	France
1903	Afternoon dress	Salmon pink dotted cotton voile, cream lace, and Steel buttons	
1903	Afternoon Dress	purple silk velvet, fringe and ivory chiffon	France, House of Worth
1904	Dress	Ivory silk gauze, light blue satin, Ivory lace, blue velvet ribbon	USA
1905	Dress	Lightly colored painted linen, silk chiffon and cotton	
1905	Dress	Blue silk velvet, blue soutache and crème lace	USA
1905	Corset	Brocaded silk, silk ribbon and elastic	
1905	Man's uniform	Red and Plaid wool, green silk ribbon, white and black leather, black velvet, muslin	Scotland
1907	Nightgown	Lightly colored bobbin lace and silk ribbon	USA
1907	Mourning Ensemble	Black silk crepe, silk chiffon	USA
1908	Coat	Black Silk faille and gold thread	France
1909	Evening gown	black lace, white taffeta, sequece and rhinestones	France

Figure 2. garments C. 1900-1909, clothing using synthetic textiles are highlighted in green.

1910	Dress	Off white cotton, lace, green silk, off white silk crepe chiffon	USA
1910	Dress	Aqua silk satin with cream embroidery net and black velvet	England
1910	Women's set	Wool and silk	Russia
1912	Wedding dress	Champagne silk	USA
1912	Dress	purple silk damask, purple cotton velvet, and fuchsia silk cord	France
1912	Dress	Linen chambray	Canada
1913	Women's suit	Brown cotton sateen, cotton floss and soutache cord, tape	USA
1913	Afternoon Suit	Velvet and Lace	USA
1913	Dress	Silk chiffon, silk crepe, black satin, cotton lace, silk satin, fur, silk velvet	USA
1913	women's suit	wool khaki colored	USA
1913	evening gown	mauve and ivory silk, satin and seed beads	France
1913	Men's prison uniform	grey denim and linen	USA
1914	Evening dress	pink and green brocade, shot silk, pink net, chiffon, lace	USA
1914	Man's Army uniform	wool twill	USA
1915	Afternoon Dress	white cotton	USA
1915	Suit	silk velvet and fur	France
1916	Suit	linen wool blend	USA
1916	Suit	Cotton denim	USA
1916	US military Nurses uniform	wool twill and metal (dark colors)	France
1917	Dress	Silk Charmeuse, lace, metallic and silk flowers (lightly colored)	France
1917	evening coat	Silk satin (dark colors)	France
1918	Suit	Dark colored velvet and satin	USA
1918	Tea gown	Chartreuse silk chiffon, ecru lace, mink, pink silk flowers, velvet ribbon	USA
1919	Evening dress	red silk lame twill, white chiffon, metal thread, silk, silk and metal applique	France
1919	Evening dress	orange silk and gold lame	France
1919	Fancy dress costume	silver gauze, red chiffon, lavender brocade , pink satin	France

Figure 3. garments C. 1910-1919

1920 Evening coat	velvet, crystal beads and rhinestones	France
1920 Men's sweater	Wool (maroon)	USA
1920 Afternoon dress	Silk crepe de chine	France
1920 Men's ensemble	Ecru wool lightly colored	India
1920 Girdle	Pink rayon satin, pink elastic, light purple velvet ribbon, metal, light purple and	USA
1920 Evening dress	silk chiffon, silk ribbon and metallic flowers	USA
1920 Girdle	Brocaded silk, elastic and ribbon	USA
1920 evening cape	green silk damask, metallic thread, fur	USA
1922 Dress	Painted silk voile, silk lace, metallic gold pigment	France
1922 Gym suit	cotton, wool, and silk	USA
1923 Dress	Black silk crepe and tan lace	USA
1923 Evening dress	silk, metallic and silk lame	France
1924 Evening dress	silk, fish scale, cellophane sequins, glass, metal	France
1924 Camiknickers	Crepe chiffon and silk satin	France
1924 Men's coat	Raccoon fur and horn	USA
1924 evening dress	black silk crepe de chine, gold lame, and tulle	France
1924 Evening dress	silk velvet , silk, and glass beads	Italy
1924 Evening ensemble	multicolor silk crinkle crepe and silk	USA
1925 Tea gown	red silk, yellow murano glass beads, and silk cord	Italy
1925 Opera cape	black silk velvet, gold lame, chinchilla fur and beads	USA
1925 Coat	silk velvet, sequins, beads and fur	USA
1925 Sailors ensemble	Cotton denim	USA
1925 Evening dress	Pink crepe chiffon	France
1926 Evening dress	black silk chiffon, crochet lace and sating	France
1926 Evening dress	black silk satin with ecru Alencon and lace	France
1926 Evening dress	gold silk chiffon, beads, and rhinestones	France
1926 Dress	orange rayon/cotton blend and multicolored cotton	USA
1926 Evening dress	cotton sequin and bugle beads	USA
1926 Dress	rayon crepe and sea beads	USA
1926 Evening dress	net, sequins and beads	USA
1927 School uniform	navy blue wool and light blue silk	
1927 Evening dress	polychrome brocade and gold lace	France
1927 Dress	unknown	Italy
1927 Evening dress	Silk chiffon and lace	France
1927 Dress	silk crepe	France
1927 Dress	silk faille and metallic braid	France
1927 Lounge pajamas	orange silk crepe and purple crepe	USA
1927 Coat	screen printed gold silk velvet and silk	Italy
1927 Evening set	silk satin , chiffon	China
1927 Suit	wool jersey	France
1928 Evening set	chiffon , sequins, embroidered net	USA
1928 evening dress	sequin, bugle beads, and tulle	USA
1928 evening dress	cotton organza and silk tulle	France
1928 Men's blazer	red and white cotton flannel	USA
1928 Men's blazer	cotton flannel	USA
1928 Men's blazer	cotton	USA
1929 Ensemble	brown silk or rayon, apricot silk surah	France
1929 Evening dress	silk chiffon	France
1929 Dress	black chiffon and cut velvet pink ribbon and fur	USA
1929 ensemble	blue, grey and turquoise wool knit and crepe	France
1929 Dress	printed silk crepe	France
1929 Ensemble	silk crepe de chine	France
1929 Evening dress	silk georgette and silk velvet ribbon	France
1929 Evening dress	off white silk chiffon and rhinestones	France

Figure 4. Garments C.1920-1929, clothing using synthetic textiles highlighted in green

1930 Evening dress	black silk satin with kid leather	France
1930 Evening jacket	satin and ostrich feathers	France
1930 set	silk crepe	France
1930 slip	silk chiffon and Alencon lace	France
1930 evening gown	Silk Satin, silk chiffon	USA
1930 men's dressing gown	yellow silk brocade and black silk satin	France
1931 Dress	Satin black crepe	France
1932 Evening dress	Cream silk Charmeuse and Alencon lace	France
1932 Evening dress	silk and self fringe	USA
1932 Dress	cotton and silk crepe de chine	France
1932 slip	silk crepe chiffon and silk lace	USA
1933 Nightgown	Silk georgette, lace, and silk satin	USA
1933 Evening cape	Wool crepe and ostrich feathers	France
1933 Evening Dress	Silk crepe	USA
1933 Corset	Satin, lace, elastic	France
1933 Evening dress	Black silk crepe with lame ribbon	France
1934 Men's suit	Wool tweed	USA
1934 Evening dress	Tulle and taffeta	USA
1934 Evening dress	brown silk Charmeuse and green velvet	France
1935 Evening gown	blue silk and black tulle	USA
1935 Evening gown	Silk satin	France
1935 Evening Dress	Metallic silk, lame and silk satin	France
1935 Evening Dress	Black synthetic tulle, silk satin and plastic sequins	France
1935 Dress	blue silk crepe de chine, and yellow chiffon	France
1935 evening set	Silk and gold lurex	USA
1935 Suit	navy blue wool double knit and white cotton pique	France
1935 Ensemble	Rayon	USA
1935 Men's jacket	Wool tweed	England
1936 Evening dress	Silk brocade	USA
1936 Coat	Wool Tweed	England
1936 Suit	Red, grey, blue wool tweed, leather, plastic	Austria
1937 Suit	Wool	
1937 Evening Suit	Celloplene faced wool knit	France
1937 Evening Coat	Wool twill and silk satin	USA
1937 Blouse	Black silk jersey	France
1937 Ensemble	ivory silk organza and satin, pink silk and faille and grosgrains ribbon	USA
1937 Men's jacket	wool herringbone twill	Austria
1938 Dress	silk faille	France
1938 Evening gown	silver lame	France
1938 Evening dress	black matte silk jersey	France
1938 Evening dress	gold lame	USA
1938 Dress	cotton	France
1939 Ensemble	navy blue silk crepe de chine and red satin	USA
1939 Evening dress	Metallic green brocade and black silk taffeta	France
1939 Evening dress	ivory rayon lame	France
1939 Men's jacket	Velvet and satin	England
1939 Suit	Wool tweed	France

Figure 5. garments C. 1930-1939, clothing using synthetic textiles highlighted in green.

1940 Men's shirt	Cotton denim	USA
1940 Shirt	Cotton chambray	USA
1940 Evening gown	silk jersey	France
1940 Ensemble	cotton denim	USA
1940 Dress	cotton	USA
1940 Dress	rayon crepe and see beads	USA
1940 Dress	silk crepe	USA
1940 Evening dress	red silk crepe	USA
1940 Men's uniform	Wool and metal	USA
1940 Nightgown	Silk satin	France
1941 Evening dress	Black lace, pink gauze, and pink silk	Russia
1941 Swim suit	wool Jersey	USA
1941 Evening dress	fuchsia silk crepe, set seed beads and sequins	USA
1942 Dress	cotton seersucker	USA
1942 Evening set	burgundy and red velvet	France
1942 Uniform	navy blue wool twill off white rayon and brass metal	USA
1942 Dress	black wool jersey	France
1942 Evening dress	Black silk crepe, taffeta, multicolor satin	USA
1943 Lingerie set	white rayon chiffon, black and white schiffle lace	France
1943 dress	Rayon crepe	USA
1943 evening set	Rayon crepe	France
1943 US army uniforms	Wool metal	USA
1943 dress	Silk crepe	USA
1944 Evening dress	Hand painted rayon crepe	France
1944 Dress	silk shaunting	France
1944 Men's jacket	wool	USA
1945 Suit	Wool	USA
1945 Suit	Wool	USA
1945 Dress	Wool	USA
1945 Suit	wool jersey	France
1945 Dress	Silk and sequins	USA
1945 Nightgown	yellow silk crepe chiffon and pink silk satin	USA
1945 Evening ensemble	rayon crepe	USA
1946 Men's jeans	cotton denim	USA
1946 Ensemble	green and red wool, black and cream chiffon	USA
1946 Suit	wool	USA
1946 Dress	pink rayon and black net with black sequins and bugle beads	France
1946 Dress	black wool jersey	USA
1947 Coat	White linen	France
1947 Two piece dress	wool twill	France
1947 dress	Crepe chiffon and silk satin	USA
1947 Evening dress	yellow orange silk, chiffon gauze	USA
1947 Evening dress	silk gauze, taffeta and tulle	USA
1947 Suit	crocheted tweed rayon ribbon	France
1947 Top	Cotton denim and pearl	France
1947 Evening Gown	Black jersey and silk brocade	USA
1947 Evening Gown	Rayon and cotton satin	USA
1947 Evening set	Black velvet and purple silk taffeta	USA
1947 Dress	silk wool faille and horse hair	USA
1947 Evening dress	rayon crepe	USA
1947 Coat	wool twill	France
1948 Suit	wool	USA
1948 Coat dress	wool twill	France
1948 Suit	heathered grey worsted wool	France
1948 Evening dress	silk shanting and boning	England
1948 Dress	wool houndstooth	France
1948 Peignor	Ivory silk chiffon , satin and ecru lace	France
1948 Swim suit	Nylon and metal	USA
1948 Men's military poncho	coated cotton	USA
1948 evening ensemble	silk satin	France
1948 dress	ribbed cotton	USA
1948 set	wool crepe	France
1948 evening dress	silk taffeta	USA
1949 evening set	rayon faille	USA
1949 evening jacket	velvet, embroidery and jet beads	France
1949 bra	nylon lace and sheen satin	USA
1949 evening dress	pink and off white satin, off white net, taffeta, feathers	USA
1949 evening dress	silk satin	USA

Figure 6. garments C. 1940-1949, clothing using synthetic textiles highlighted in green

ANALYSIS

The first noted use of synthetic material is in 1905, elastic in a corset. This is the only noted use of synthetic fiber from 1900 to 1909. There is no noted use of synthetic textiles between 1910 and 1919. Synthetic fibers elastic and rayon were used in garments five times between 1920 and 1929, first seen in elastic for undergarments, then rayon in outerwear garments. Four instances of synthetic textiles occur between 1930 and 1939, with one case being elastic in undergarments, and the three others being Rayon in outerwear garments. There are twelve occurrences of synthetic textiles in a variety of contexts from underwear to outerwear between 1940 and 1949.

DISCUSSION

I analyzed 221 garments in the virtual collections of the museum at F.I.T. Of these garments, twenty-two used synthetic fabrics in their construction. seventeen of these garments included rayon, a semisynthetic textile in their construction. Three of these garments included elastic in their construction, two included some other synthetic material, like plastic or tulle, and two garments included nylon, the first completely synthetic fabric. The frequency of these fabric choices increased as we neared midcentury. These results are coherent with a rough timeline of the invention of early synthetic textiles. Rayon was initially invented in 1884 by Sir Joseph William Swan, and the fabric has been in commercial production since 1891. However, rayon was not heavily marketed as a clothing textile until the 1920s, when the demand for light and washable fabrics was far greater. Additionally, we also see the fully synthetic fabric nylon starting to pop up in the late 1940s, about a decade after its invention in 1939.

Through the analysis of synthetic vs. natural fibers, we can conclude that fashion was changing, and beginning to lay the foundations for the textiles and other practices used today. Marketing for these products often hinged on easy use, and the “wash and wear” quality to these new garments. This likely wasn’t the only draw to using synthetic textiles, the industrial revolution saw a rise in factory work over highly specialized tailors. Natural fibers, such as wool or silk, require somewhat specialized knowledge to be worked with properly. Switching to synthetics likely allowed for the use of “unskilled workers” who only needed to know the basics about sewing to complete mass produced garments.

To further explore how garments were physically changing, I would suggest researching the trends in silhouette, and how these trends were effecting the production method of the garments. Were they hand sewn? How complex were the patterns? How quickly are these trends falling in and out of favor? Are a few questions that could be asked and answered about antique garments in the future.

LIMITATIONS

It should be noted that while this data set is accurate as possible, its sample size is limited by the availability of online resources and time. Most of the garments included in this study are upper-middle class women's garments. A larger variety of clothing from different classes of people may yield different results.

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