

ABSTRACT

MCCLEAN, TAYLOR. *An Analysis of Three Machine-Knitted Men's Coats from the Late Eighteenth Century*. (Under the direction of Dr. Katherine Annett-Hitchcock and Professor Nancy Powell).

This paper seeks to use an object-centered material culture approach to analyze three machine-knitted men's coats from the late eighteenth century in order to gain new insight about British and American fashions during that era. These coats are currently housed in the Museum at the Fashion Institute of Technology (FIT) in New York, NY; in the DeWitt-Wallace Decorative Arts Museum in Williamsburg, VA; and at Berrington Hall in Herefordshire, England, as part of the Snowhill Wade Costume Collection. The material culture approach is aptly applied to the study of historical costume because material culture has the ability to combine an analysis of the physical characteristics with the social implications of the clothing, all the while relating the garment to its cultural context. Furthermore, many costume researchers have taken a similar approach to analyzing clothing (Haulman, 2011; Matheson, 2011; Simmel, 1957; Taylor, 2007).

These three machine-knitted men's coats are worth studying because each of their respective museums consider these coats as rare; little is known about the origins of these coats, and during the late eighteenth century only stockings, breeches, and lace were typically made using the stocking frame (Felkin, 1967; Henson, 1970; Black, 2012). In addition, only Terry Brackenbury (1989) and Irena Turnau (1991) document evidence of machine-knitted outerwear during this era, and both of these works were written over twenty years ago.

Therefore, this paper documents and compares the construction methods, materials used, and aesthetic details of each coat. These three coats were compared to a control or a typical woven coat of the era, in order to determine the fashionableness of the knitted coats.

Next, other knitted items, such as breeches, were compared to the three coats in order to establish what knit structures were obtainable and how they were aesthetically and functionally applied in various garments. Finally, data gathered from late eighteenth century British and American newspapers provided further evidence as to the prevalence of machine-knitted outerwear and the technology that was available to make such garments. Analysis of this data will provide insight as to who might have worn a machine-knitted coat and where he would have worn it. This research is significant to museum curators, sociologists specializing in the late 18th century, and historians of knitwear technology and of eighteenth century fashion.

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An Analysis of Three Machine-Knitted Men's Coats from the Late Eighteenth Century

by
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CHAPTER 1: INTRODUCTION

1.1| THE NEED FOR THE STUDY

This research began with a chance discovery of a late eighteenth century machine-knitted man's coat in the Snowhill Wade Costume Collection at Berrington Hall, Herefordshire. Its very existence was surprising because presumably only stockings, breeches, waistcoats, and small accessories were made with machine-knitted fabric during that era (Black, 2012; Chapman, 2002). Furthermore, many garments from the eighteenth century that have survived until today have done so because of their great monetary or personal value. The majority of historical garments in museums are richly embellished, made with fine fabrics such as silk, that are of painstaking construction, or that are considered rare (Baumgarten, 2002). At first glance, the Berrington Hall (BH) coat is none of these things except rare, as categorized by the museum. The knitted cloth is a fine gauge, the yarn is made of wool; there is no embroidery, and the only embellishment is in the braided frogging trim around the buttons. This coat, which seems to have defied the odds by existing, prompted a search for additional such items. This search revealed similar machine-knitted coats dated from the late 1700s at the De Witt Wallace Museum in Williamsburg, Virginia; the Los Angeles County Museum of Art, California; The Museum at the Fashion Institute of Technology (FIT) in New York; and The Costume Museum in Hague, Netherlands. All of these museums have classified the coats as rare and have little information about the garments. Adding to the mystery, three of the five coats are nearly identical in silhouette, style, construction, and adornment. These three coats in Virginia, New York, and

Herefordshire are therefore the focus of this research (noted as the DW, FIT, and BH coats in this study).

Despite the abundance of historical costume research on the eighteenth century, the three machine-knitted coats present somewhat of an enigma. Books by Tortora and Eubank (2005), Baumgarten (1999 and 2002), Warwick *et al* (1965), and Braun-Ronsdorf (1962) all describe in depth men's fashions of the eighteenth century from their coiffure to their shoe buckles. McKenzie (2004) details the different types of buttons found on men's apparel and their meanings; Baumgarten (1999) and Waugh (1964) give guidelines for the construction of eighteenth century garments; and Hart and North (1998) provide the reader with close-up images of construction details such as seaming and embroidery. These resources are valuable in determining the decade, construction methods, and fashionableness of historical garments. Although Baumgarten (2002) and Black (2012) mention frame-knitted stockings and breeches, there is limited scholarship and information on eighteenth-century machine-knitted garments.

Therefore, part of the mystery of the three coats is due to the lack of literature on historical cut-and-sewn knitwear. Much of what does exist is focused only on hand knitting throughout time, the history of knitting guilds and hosiery unions, and machine knitting after the mid-1800s. Henson (1970), Felkin (1967) and Chapman (2002) provide excellent accounts of the origins of the stocking frame, innovations to the machine, and issues within the knitting industry from the mid-1600s to the turn of the millennium. Black (2012) contributes to the history of hand knitting from the Coptic era to the present day with a focus on the role knitwear has played in influencing fashions. Thirsk (1989) also adds to the history

of hand knitting with a particular emphasis on the stocking fad that began with the Tudors. Most importantly, only Brackenbury (1989) and Turnau (1991) document any evidence of machine-knitted coats. Brackenbury had, in fact, mentioned the coat now housed in the Wade Costume Collection in Herefordshire in his 1989 article about the history of knitting and even stated that little was known about such garments, yet still no new information about the coat has been uncovered. Turnau (1991) gives an extremely helpful account of various knitted items throughout Europe and includes the machine-knitted coat located in the Costume Museum in Hague. In addition to this account, she describes the histories and techniques of hand and machine knitting throughout Europe. These sources are critical in analyzing the three coats from a technological perspective and in understanding both the history of the knitwear industry and the consumption of knitted goods, but still provide little information as to suggest who might have worn the coats and in what situations. Furthermore, these sources do not document the garment construction or the knitted fabric construction of such coats.

1.2| PURPOSE AND PROPOSED METHODOLOGY

Therefore, the purpose of this study is to seek to understand how these coats came to exist and what kind of technology was used to make them. This study will also suggest who might have worn these coats as well as where they were worn. It is common knowledge that clothing, both now and throughout history, can reflect strong statements about a person's beliefs and economic and social standing (Baumgarten, 2002; Haulman, 2011). Thus, this research also seeks to use a material culture approach to understand what kind of image was being communicated by wearing these coats and how society accepted that image. Historical

costume researchers such as Gilbert (2012), Taylor (2007), and Matheson (2011) have adopted a material culture approach in their research and have proven the value of taking such a direction. By following Prown's three-step material culture method (as described by Harvey, 2009) of observation, deduction, and conclusion, the physical characteristics of the three coats will be related to their social functions, thereby placing the coats in a cultural and social context. In addition, newspapers from the era may indicate how available these coats would have been to consumers in the late 1700s as well as provide information on the capabilities of stocking frames from the same time. Secondary resources such as those described above will further help place the coats in a technological, social, and cultural context.

1.3| SIGNIFICANCE OF THE STUDY

This research is significant to museum curators, sociologists specializing in the late 18th century, and historians of knitwear technology and of eighteenth century fashion. Currently, no study has looked at machine-knitted garments other than stockings and breeches. Indeed, there is a major gap in the history of the early development knitwear. The goal of this research is that an analysis of these three knitted coats in Virginia, New York, and Herefordshire will help to illuminate some of this undocumented history and further elaborate upon the rise of ready-to-wear machine knitted garments. Furthermore, this research will contribute additional information as to both the consumption and production of knitwear and the statements communicated through wearing garments constructed with knitted fabric in the late eighteenth century.

CHAPTER 2| LITERATURE REVIEW

2.1| INTRODUCTION TO THE LITERATURE REVIEW

The purpose of this research is to investigate three men's coats constructed with machine-knitted fabric from the early eighteenth century using a material culture approach. The intention of this research is that such an analysis of these coats will provide new insights into both the social function of these coats and into the culture that created them. Therefore, it is necessary to review the social life, consumption patterns, and garment production and acquisition methods of both England and America in the late 1700s. This review will provide a foundation from which to analyze the cultural context of these coats. Since the three coats are constructed of knitted material, it is also important to review the history of knitting and the knitting technology available in the second half of the eighteenth century in order to establish the technological context of these coats. Lastly, a description of the material culture approach, its various methodologies, and previous work using a research framework of material culture will be explained, leading to a justification of the use of this method.

2.2| SOCIAL AND CULTURAL BACKGROUND

2.2a| Eighteenth century social life and consumption of fashion in England

Although two of the three coats are housed in American collections, all three coats are considered English in origin by their respective museums. Therefore, it is important to consider the social life and consumption of fashion in England during the late eighteenth century. This will provide a better understanding of how the wearers of the coats may have come to own the garments and where they might have worn them.

Many men of wealth during the eighteenth century lived a life of luxury. In the mornings, he breakfasted late and received friends at home in his banyan (or dressing robe). In the afternoons, he went to a popular spot or shop, and after dinner, he might visit a coffee house or see a play (Tortora and Eubank, 2005). Some of the luxuries previously reserved for a wealthy man, however, were increasingly becoming more accessible to the middle and lower classes. Stobart (2005, p. 479) states that there was a “general expansion of the arts and fashionable culture central to eighteenth century enlightenment and modernity.” As part of this expansion, social gathering places such as theaters, assemblies, promenades, horse races, and shops were no longer limited to metropolises such as London. Not only did social gathering places expand to smaller cities, but the spaces they occupied also transformed to reflect the “civility” of their nature – for example, old building facades would be renovated in the Classical style. In addition to “civility,” “sociability” was also a cornerstone of urban leisure. This was reflected in the stores of shopkeepers who would decorate with cushions, chairs, and mirrors in order to promote “sociability,” and who would even entertain customers in private parlors. Furthermore, it was perfectly acceptable to visit shops without ever purchasing anything – shopping had become a sociable activity for both men and women. In fact, the notion of “urban leisure,” had spread so much by the late eighteenth-century, that in the northwest of England, a person was not more than twelve miles away from a decent sized shopping area (Stobart, (2005; Stobart and Schwarz, 2008).

As illustrated by the multitude of stores, fashion in particular was one of these privileges now available to the masses. Even the less wealthy now wore fashionable dress when they could, as “every servant girl, has her cotton gowns, and her cotton stockings...”

(Lemire, 2005, p. 132). According to Beverly Lemire (1984, p. 21), the lighter, less durable, and “therefore more frequently replaced” textiles that were available sparked a change in England – these fabrics allowed everyone to be fashionable, and “no one was precluded from certain sorts of dress...the styles that there were appeared commonly in all regions and in all classes.” Furthermore, the population was beginning to change their clothes buying habits – clothes were no longer as frequently passed down except to servants or unless the garment was of particular value.

Therefore, the only hindrance to being fashionable was how quickly fashionable news could spread, and this mostly affected only the most remote locations. Eighteenth century publications such as *The Ladies’ Diary*, *The Women’s Almanac*, and *The Gentleman’s Magazine* included fashion plates and essays on what was being worn in London, and were thus a key element in the spread of fashion throughout England. The increase in fashion publications also helped tailors spread their good reputation, leading to an increase of local tailors “who could supply ready-made garments” (Lemire, 1984).

2.2b| English garment production and acquisition in the eighteenth century As fashion became more accessible to a broader segment of the English population, methods of obtaining these fashions also expanded. Second-hand clothes dealers in particular increased in popularity during the eighteenth century. Dealers would often visit various households collecting used clothing and accepted garments as collateral for loans. Women also worked in the second-hand clothing industry as seamstresses mending used garments for sale, as hawkers selling clothes, and sometimes even as managers of their own pawn-broking and sales businesses, although usually men ran such enterprises. Clothing theft helped support the

second hand garment industry, further attesting to the extent that the desire for and value of fashionable garments had reached in the late 1800s (Lemire, 1997).

This second-hand trade led to an increase in the consumption of fashion – as Lemire states, “the percentage of income spent on clothing would then be more flexible when a portion of the cost...could be counted on from the resale of old clothes” (Lemire, 1984, p. 30). This was an important component of the rise of the ready-to-wear industry, she argues, because it shows that consumers were previously “accustomed to buying garments already made up” and that, in fact, many consumers were purchasing a good deal of their clothes from storekeepers. Though bespoke clothing was still the norm, the fashionable ready-to-wear clothing market was growing. Probate inventories of deceased London tradesmen from the late 1600s further confirms Lemire’s argument that English people had long been accustomed to buying goods already made. For example, the merchant Thomas Walker’s inventory included 434 “mantuas of crape,” 458 silk petticoats, 120 gowns, 39 coats, and 70 suits, while another merchant, John Broadhurst, had “120 coats of various size and fabric, 87 waistcoats, 122 breeches and over 160 mantuas” (Lemire, 1997, p. 64). Around this same time, the East India Company became the first company to expand the ready-to-wear trade to a much larger scale. With an influx of Indian fabrics, the Company became concerned that the market would be as flooded. Thus, to diversify, they made up some of their fabrics into ready-to-wear garments in order to offer more variety to their consumers.

The East India Company would not have been so successful, however, without the establishment of large-scale clothing producers. One such producer was a now anonymous Manchester manufacturer, which, aided by the rise of the Lancashire cotton industry, was

able to sell “ready-made gowns” cheaply in bulk – for example, one of their customers “received over 800 gowns in a variety of colours and patterns and in several fabrics over a one-year period from 1777 to 1778” (Lemire, 1984, p. 37). The Manchester firm also sold nearly finished as well as fully finished garments. Waistcoat “shapes” were a commonly unfinished product, where the shape of the garment was outlined on the fabric. Large manufacturers would employ “tailors” to make these items, although they did not make the garments to measure and instead created variations of one size. Pieces like waistcoat shapes allowed the consumer to easily adjust the size of the waistcoat and add fashionable embroidery to the piece before it was constructed. Customers of large manufacturers such as the Manchester firm often owned warehouses that sold both a variety of general items and specialized items. These warehouses were open to the public, and thus, an English consumer could shop at “Bromley’s Linen and Shirt Warehouse,” “Mr. Taylor’s ‘Quilted Coat Warehouse,’” or “Mr. Bryant’s ‘Great Coat and Mecklenburgh Cloak Warehouse’”. Many smaller, individually owned shops would often supply their stores with ready-to-wear items and “shapes” from warehouses such as these. The presence of typical ready-made items such as waistcoat “shapes” in stores outside of London reveal that ready-to-wear clothes were sold throughout England (Lemire, 1984).

Not all clothes were bought ready-made in the late eighteenth century, however, and in fact most clothes were still made bespoke. Though measuring tapes were not yet common in the late eighteenth century, tailors would develop patterns by taking a customer’s measurements using parchment strips, yardsticks, and squares. They would also use their knowledge of the body’s proportions, gained through experience and practice, in order to

draft and grade patterns. A parchment strip consisted of only a strip of paper notched at certain lengths and widths. Alternately, a tailor could obtain the size of a customer by copying and measuring the garments that were currently being worn. While the master tailor took measurements and cut patterns, a journeyman tailor was usually employed to sew the garments (Aldrich, 2000).

Tailors in the late eighteenth century were not afforded the same protection of their trade as their earlier counterparts who were safeguarded by guilds and statutes. The English Civil War in addition to the rise of the ready-to-wear industry began to erode the influence of tailor's guilds, especially as the sale of ready-made garments did not require the years of apprenticeship mandatory for a tailor. According to Lemire (1997), women were often the makers of ready-to-wear apparel as they were cheaper to employ than men. These women worked in the backrooms of individual shops or in large companies such as the Manchester firm, where fabric was cut under close supervision and distributed to women to be sewn. In addition, large military contracts for uniforms contributed to the demise of tailor's guilds – tailors' hours became longer and demands became much greater so that they reverted from “artisans” to “wage labourers.” This led to a gender-division of garment production – men “worked predominantly in wool fabrics, making coats, jackets and breeches...while greater numbers of needle-women labored sometimes on complementary goods and sometimes in competition.” (Lemire 1997, p. 53).

2.2c| Eighteenth century social life, consumption, and garment production in America Though all three coats are considered English in style, two of the coats nevertheless are housed in American collections. Thus, it is important to consider the possibility that the

coats may have been imported to America or that English tailors may have immigrated to America, and to understand the influence that England had on American fashions.

America was a major consumer of English-manufactured goods throughout the eighteenth century. Not surprisingly, the fashions in America closely followed those of England, although they were also somewhat influenced by other European countries (Tortora and Eubank, 2005). Some fashionable clothes were imported to America, while others made their own clothes following the fashions displayed in fashion plates and on fashion dolls. As in England, most clothes were still made by tailors or mantua makers in colonial America.

In many ways, the acquisition of garments was similar in both England and America. While the majority of American goods were imported, storekeepers kept the same variety of items and devoted as much time to the arrangement of these items as English storekeepers. This was true for both major urban areas as well as the back-country – in referring to the latter, Martin states that, “merchants had to have basic textiles such as coarse linens for the less wealthy and for slaves as well as provide a variety of more luxurious, colorful, and fashionable items that appealed to the more affluent, albeit limited, market” (2008, p. 17). In addition, those with money to spare had the ability to order anything they liked from England with the help of a personal London proxy-shopper. Other wealthy families would have a “family merchant partner” who would ship goods to them from elsewhere within the colonies. While the less wealthy might not have such convenient access to goods, the American colonies, like in England, also obtained goods from peddlers and through inheritance (Martin, 2008).

Unlike England, the American colonies lacked major forms of industrialized manufacture – for example, waterpower spinning of yarn was not introduced to the colonies until 1790. This forced Americans to rely heavily on English imported goods, though Laurel Thatcher Ulrich maintains that Americans sought to “retain their rural republic” and were proud of their homespun, American-made goods. Women would hold gatherings such as “spinning frolics,” “wool breaks,” “twisting parties,” and “quilting bees,” in order to socialize and make the textile production process more enjoyable (Ulrich, 2001)

The domestic textile production process was indeed long and tiresome and typically used flax or wool. Shamma (1982) provides an excellent description of domestic flax processing. A quarter- to a half-acre was sufficient to cultivate flax, after which it was pulled, dried, and dressed by beating the stem to separate the fibers. The fiber was then wound through a comb in a process called hackling to remove the coarse tow required for rope making. Next, the fibers were spun into yarn, bleached through a days-long process of warm, cold, and ash washes, and finally woven. Even after the flax yarn was woven into linen cloth, however, more bleaching sessions ensued – Shamma quotes one source as stating “to bring the fine linen for shirts to the required degree of showiness no less than thirty and sometimes forty bleachings were necessary” (1982; p. 254). Wool processing was an equally involved endeavor – it was first sheared from the sheep, then cleaned, greased, combed through carding, and spun at least once (twice was required for weaving to create a plied yarn). Once the wool yarn was woven, the cloth had to be fulled to soften the fabric and further remove any impurities by wetting the cloth, beating it with sticks, rinsing it, and finally leaving it to dry (Shamma, 1984).

Obviously, domestic production of linen and wool cloth was an extremely time consuming process from start to finish. Therefore, many households would wait for an itinerant weaver to weave the cloth for them. Shammass states that women would often sell handspun “yarn to storekeepers, who in turn put it out to knitters or weavers and then paid to have it whitened or fulled” (1984, p. 258). Based on Massachusetts inventories and the fact that a third to a half of early American farmers were tenants and that only the richest farmers owned flax patches, sheep, and slaves for home cloth production, Shammass (1984) concludes that colonists and early Americans were not self-sufficient. While households did rely greatly on products of their own making, they most likely only participated in a few steps of textile production and supplemented their efforts with imports and goods sold by peddlers, neighbors, and tradesmen. In other words, as compared to English households, colonial and early American households participated more in the making of their own textiles, even if they were not involved in the entire process from start to finish.

Of the textiles that early Americans did create or embellish, they were careful that their products were not overly adorned since “in the early republic, the attempt to define an American character reinforced long-standing religious concerns about luxury” (Ulrich, 2001, p. 302). Benjamin Franklin reflected this state of mind by cautioning against “the common man’s petty vanity of tricking out himself and his family in the flimsy manufactures of Britain,” (Martin, 2008, p.8). In other words, American colonialists were discouraged by their leaders to boycott the corrupting imported luxuries of Britain and to rely instead on their own frugal, but virtuous, homespun. Even George Washington dressed entirely in homespun

during his first inauguration, representing both virtuousness and faith in the burgeoning American economy.

As American textile production began to establish itself, however, Americans increasingly saw luxury not as a sin, but as a way of supporting their country (Zakim, 2001). Although the colonies did not have a textile manufacturing industry as extensive as did Britain, they did possess a few textile factories. William Molineux was one such factory owner in 1770 and a leader of the non-importation movement, in which colonialists were encouraged to rely on goods of their own making. According to Zakim, Molineux's yarn spinning business was so successful that he had to expand and vertically integrate – to his several hundred spinning wheels, he added “an integrated cloth ‘apparatus’ of warping and twisting mills, weaving looms, a furnace, hot and cold presses for finishing the goods, and a complete dyehouse with a large assortment of dyestuffs” (2001, pg. 1568). In addition to weaving looms, colonialists also had other textile machinery available to them, such as stocking frames and the spinning jenny (Zakim, 2001; Schoeser, 2010).

2.3| EIGHTEENTH CENTURY WESTERN MEN'S FASHION

A description of an eighteenth century man's typical wardrobe and a summary of the fashions of the day are critical in placing the three knitted coats in a cultural context. Without knowing what constituted the norm as far as men's fashion, it would be difficult to determine the purpose, or social function that these coats played. Thus, the following section outlines the items that could be expected in a man's wardrobe as well as the changes that men's fashion underwent throughout the eighteenth century.

A man's wardrobe in the eighteenth century consisted of "undress," (lounging clothes), "dress," (slightly more formal clothes), and "full dress," (the most formal of clothes, for example, court dress), (Tortora and Eubank, 2005, p. 227). The three-piece suit, which might appear in a man's dress or full dress wardrobe, first appeared in the 1660s and has remained fashionable until today. During the eighteenth century, however, the three-piece suit looked much differently than it does today. In the early 1700s the coat of the suit was flared below the waist and reached to the knees. It also had full, cuffed sleeves. The waistcoat was slightly shorter than the coat, and breeches reached the knee with center-front buttoned openings at the waist. Up until the 1750s, the skirts of the coat remained very full, but the waistcoat slowly began to shorten although it remained highly decorated with embroidery. The coat and waistcoat were usually collarless, and the sleeves barely reached the wrists in order to display the frilled sleeves. A fine linen stock was also worn folded around the throat and fastened in the back, allowing the ruffled edge of the shirt to be seen. Breeches tended to be of velvet, silk, knit cloth, or woolen cloth and fitted to below the knee (Warwick, Pitz, and Wyckoff, 1965; Tortora and Eubank, 2005; Bradfield, 1958; Braun-Ronsdor, 1964). According to Bradfield (1958, p. 118) Small patterns were popular and fashionable colors in the first half of the century included claret, green, blue, light and dark browns, a corn color, and red.

During the 1740s coat skirts were stiffened to stand away from the body and were shaped by pleats, and coat sleeves remained very full with very large, deep cuffs. After this decade, however, suits slowly became slimmer in silhouette while the waistcoats continued to shorten to show off more of the torso and thighs. The frock coat, similar to the suit coat but looser in

fit with a turned down collar and originally meant for everyday casual wear, became more fashionable among English men. In the years just before the American Revolutionary War, the male silhouette finally lost its full shape and adopted a long and slim look. This look would remain popular throughout the rest of the century with both American and English men (Baumgarten, 2002). Standing band collars became the fashion for formal coats and waistcoats, and coat sleeves became very narrow with small cuffs during the last quarter of the eighteenth-century. The coat was cut in a curve away from the front and waistcoats ended at the waist, requiring breeches that previously sat low on the hips to rise to the waist. The pleats of the coat's skirt were moved from the sides to the back (Bradfield, 1958; Warwick, Pitz, and Wyckoff, 1965). Breeches also became longer and daytime suits became more practical, although the rise of the Macaronis, with their exaggerated styles and loud outfits, also occurred during this time (Baumgarten, 2002). At the end of the eighteenth century, prominent chests were fashionable and coats were sometimes cut straight across at the front, with high collars almost to the ears and again, a slim silhouette. Breeches were also longer and tighter and increasingly made out of knitted fabric for stretch (Baumgarten, 2002). Popular colors included crimson, blue, brown, grey, green, and black by the end of the eighteenth century. White and light colored embroidered waistcoats were popular, and coats and breeches were often made with striped fabric. Embroidered velvet, silk, and satin, however, became reserved for court wear only. (Bradfield, 1958). Figure 2.1 illustrates a man in typical dress for informal day events from 1775-1780, while Figure 2.2 shows a typical pattern for the construction of a coat from 1775.



Figure 2.1. An image of a man in typical informal day dress from 1775-1780, illustrating the general silhouette of coats during the era as well as other garments that would be worn with the coat. This coat will also be described later in the study as a comparison to the three knitted coats. Source: Victoria and Albert online collections.

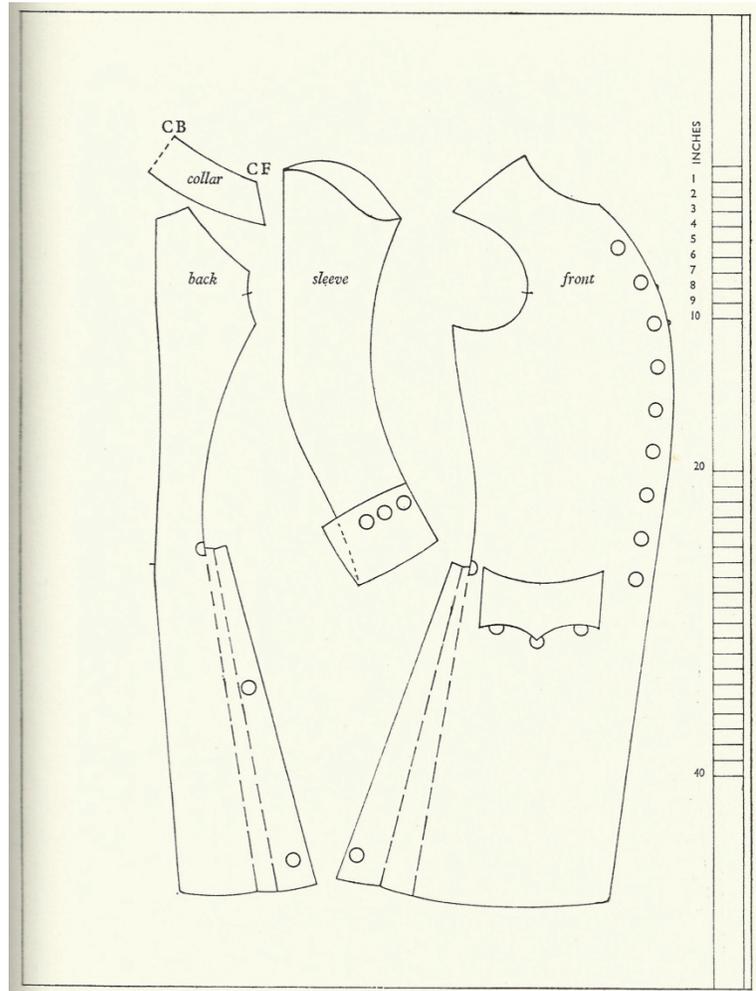


Figure 2.2. An illustration of the components and construction of a coat from 1775, showing the narrow sleeves, cut-away curved front, and pleat locations. Source: Waugh (1964, p. 75).

The above description tells of the general silhouettes throughout the eighteenth century, but the details of clothing were equally important. Beginning in 1750, the patterned motifs on suits became smaller in scale than they had been in the past. Twenty years later, daytime suits became even more sober in color and pattern, and men often wore plain dark coats of woven wool. According to Braun-Ronsdorf (1965, p. 14) “fashion leaders [during this time] were less concerned with always wearing the latest thing; they preferred to keep the existing styles

with few changes, but looked for exquisite quality...”. This change in fashion was greatly influenced by French styles, which reflected the ideological beliefs of the populists French Revolution (Braun-Ronsdorf, 1965). At the same time, military-influenced braiding became popular on fashionable dress. Even buttons had their place in fashion – up until the 1780s, slightly domed buttons embroidered covered with silk thread in a lattice like design were popular. These buttons were rightly called basket buttons as they very much looked like a basket weave, but they were also known as Leek buttons (Baumgarten, 2002; McKenzie, 2004).

As important as the details of a man’s coat were, stockings were even more crucial to a man’s outfit in the eighteenth century. Fine, silk knit stockings were almost always decorated with clocks, which referred to the elaborately embroidered areas on the inner and outer ankles. Both hand- and machine-knitters used front and back stitch combinations to create subtle designs in stockings (front stitches form a flat “v” shaped stitch in the front of the fabric, while back stitches form a horizontal stitch in the front of a fabric). By the late 1700s, clocks began to go out of style and vertically striped stockings became the fashion. This is an important fashion trend to recognize since these vertical stripes were at first achieved by knitting the stocking sideways before later inventions and modifications were added to the frame – this stocking would be knitted with the opening at one side and the toe at the other, and then be seamed up the back of the leg. (Baumgarten, 2002). This meant that vertically striped stockings had to be cut and sewn, since they could not be shaped sideways on the stocking frame. The length of the stocking would be determined by the width of the knitted fabric, which, once knitted, would be rotated 90 degrees so that the wales of the fabric were

horizontal and the courses vertical. The pattern of the stocking would then be cut and sewn from this fabric (Matkovic, 2012). If stockings could be knit sideways at a fine gauge and were cut and sewn, we can infer that the frames at this point could knit wide widths of fabric and that other garments could also be cut and sewn out of fine gauge knitted fabric. The widths, gauge range, and abilities of stocking frames will be further described in the next section.

2.4| EIGHTEENTH CENTURY KNITTING TECHNOLOGY

2.4a| A brief history of knitwear While the previous section has sought to provide information on the social life and consumption patterns, fashions of the day, and garment production methods in order to help place the three knitted coats in a cultural and social context, the following section will focus on knitting technology. An understanding of the history of knitting technology is critical in order to place the three coats in a technological context.

According to Sandy Black (2012), a knitted fabric is made by rows of individual loops created by one thread, and these rows of loops join with other rows to form the fabric. Knitting is a technique that has been around for centuries, and although we do not know when or how it first originated, we do know that weaving and netting skills came before knitting. This is evidenced by the lack of an exact word for the technique - there is no Greek and Latin word for it, and European languages derived words for knitting from the words for older skills of weaving and netting (Black, 2012).

The earliest examples of hand knitting occur from 1190 to 1290 and are scattered throughout continental Europe. These items – mostly gloves, with singular examples of leggings and cushions – were meant for the Church and for royalty and already display complex patterning and shaping skills. Scholars suspect that more common and less elaborate knitted items also existed during this time, but as with most artifacts throughout history, only the most valuable and prized items were preserved (Baumgarten, 2002).

Although France had a knitting guild by 1366, knitting was not a commercial industry in England until the fifteenth century, corresponding with the rising popularity of caps. Capper's guilds had been established in the mid-thirteenth century, but members of these guilds made hats of woven fabric until the mid-fifteenth century. Woven hats, particularly of velvet, were still made, but there was a rise in knitted caps during the second half of the fifteenth century. Wool caps were first knitted, then blocked, felted, thickened, and finally shorn, so that they were almost impervious to weather. Many knitted caps of cheaper materials were finished to look like the more expensive velvet caps. Caps continued to rise in popularity during the Tudor times, so much so that the industry became an important part of England's economy – the Cappers Act of 1571 tried to protect the capping industry from the rising stocking industry by requiring everybody (excepting nobles and women) to wear an English cap of wool on Sundays (Thirsk, 1989).

Caps eventually fell out of fashion as stockings became the popular item of the day. According to Thirsk (1989, p.10) the “success [of knitted stockings] is again explained by a change in clothing styles in the sixteenth century” as men's styles changed from long hose and breeches to stockings that showed off the leg. The Tudor court was impressed by the

Spanish imports of luxurious silk stockings – the knit structure of the stockings allowed for a more elastic material than cloth hose, which enabled the garment to fit closer to the leg with more comfort. In addition, the knitted stockings kept their shape better and allowed for more elaborate patterns (Hills, 1989). The stockings could also be hand-knit in the round, with seamless shaping of the heel and calf, allowing for additional comfort (Black, 2012). The English loved these new stockings – in fact, the “demand for knitters grew so rapidly that parish authorities from the 1580s onwards were teaching knitting to the poor in towns and villages alike.”(Thirsk, 1989, p. 11) In contrast to caps, stockings required a much simpler manufacturing process, as they needed no special finishing. Rural English farmers could hand-knit stockings while watching their cattle or sheep, or during short breaks between their daily chores. This allowed the stocking industry to expand outside of specialist centers in town and allowed farmers to earn extra income on the side. And expand it did – by the late sixteenth century, the booming stocking market employed 90,000 people in England and had become a critical aspect of the English economy (Hills, 1989; Thirsk, 1989). Not surprisingly, this demand for stockings led to the invention of the stocking frame by William Lee in 1595.

2.4b| The stocking frame and its improvements According to Henson (1970), Lee wanted to make a machine which could create an entire knitted course at once, but was at first discouraged by the idea that the machine would have to knit in the round, like hand knitters. Only after watching a hand knitter work the heel of the stocking with two needles did he realize he could make a flat “web” with a machine, and then join the selvages by hand

to create a round shape. Thus, he based his machine on a two-needle knitting method, where one needle held the loops while the other needle formed a new row.

After some experimentation, Lee settled on creating a bearded needle that consisted of a long, curved hook with a groove in the shank of the needle. By pressing the end of the hook into the groove, he could easily slide a newly formed stitch off of the needle. The thread for creating the loops was run through the long, straight end of the needle. In Lee's first frame, he placed these needles eight to an inch, and created a wooden bar, or presser bar, to press the end of the hooks into the groove in one motion. The presser bar allowed Lee to achieve his goal of creating an entire course at once. Lee next created a lever, or jack, for each needle, and a jack sinker to catch the thread and carry the thread over the needles. A half jack connected the movements of the jacks, combs, and springs, and was attached to the verge bar, which stopped the heads of the jacks when the locker bar pressed them up. The jacks were forced down by a slur cock, which was worked with a lever (Henson, 1970).

In order to create a knitted fabric, Henson outlines the following steps. First, the thread is carried over the needles by hand, and the slur is drawn to force down the jacks. The lead sinker is then pushed down on the thread and the jacks are locked up using the thumb presses. The thread is brought to the needle head, after which the frame is thrown up and the "web" is pressed over the needle to form a loop. Using the foot lever puts down the presser, and the work is left on the needle beard that has now been pressed into the groove. Next, the presser is allowed to rise again, bringing the web over and off the needle heads. The frame is moved down, catching the web with the point of the sinker. While the frame is still down, the work is taken back with the point of the sinker, after which the frame is raised again to its

normal position and the thumbs left off the thumb press, so that a new series is ready to begin (Henson, 1970).

The third quarter of the eighteenth century saw a variety of improvements and added contraptions to the stocking frame. Such inventions included a tuck presser, which allowed fabric to have a ribbed appearance; a Derby rib machine, which, in combination with the tuck presser, could form eyelets and pointelles; and a tickler bar, which created another method of forming eyelets and pointelles. Other improvements and variations to the stocking frame and these aforementioned inventions resulted in the creation of a variety of knitted fabrics, including silk velvet, knotted hose, twilled hose, knitted brocade, warp-knitted fabric, and mesh fabric (Felkin, 1967). In addition to the variety of structures available, there was also a variety in the width and gauge of fabric that could be produced on stocking frames. For example, newspaper articles from the era reveal that stocking frames could knit a worsted fabric at 24 gauge on a machine; a knit silk fabric from 25-26 gauge on a machine from 16 to 19 inches wide; and one machine could make a fabric as fine as 30 gauge. The various widths and gauges of stockings frames will prove to be very important in the analysis of the three coats undergoing study.

Furthermore, the second half of the eighteenth century saw a new method of producing stockings. Traditionally, stockings were shaped, or fully-fashioned, on the stocking frame by adding or reducing stitches in a course. According to F.A. Wells (1972, p. 80), this created a selvedge in the fabric, “so that even if the seam gave way the fabric did not suffer” – in other words, the selvedge prevented the fabric from unraveling even if the seam broke. In contrast to this traditional stocking method, a new method, or “cut-up work,”

began to increase in popularity. Such work was not shaped, and rather lengths of fabric were knitted from which a pattern was cut. This method was much less labor intensive and therefore cheaper, although the quality of the work was reduced since there was no selvedge – without a selvedge, the fabric is more prone to unraveling (Wells, 1972). It is important to note the both of these methods of stocking production, the rapid rate of technological innovations to the stocking frame, and the myriad of fabrics capable of being produced on the machine because these factors will later help place the three knitted coats in a technological context.

2.5| THE MATERIAL CULTURE METHOD

2.5a| Theories and definitions of material culture The three coats in this study were analyzed using a material culture approach. While the reasoning for choosing this approach will be explained later, it is first important to understand what material culture is. According to Jules David Prown (2001, p. 70), material culture in essence is:

...The study of material to understand culture, to discover the beliefs...of a particular community or society at a given time. The underlying premise is that human-made objects reflect, consciously or unconsciously, directly or indirectly, the beliefs of the individuals who missioned, fabricated, purchased, or used them and, by extension, the beliefs of the large society to which these individuals belonged.

Clothing, therefore, is an excellent subject for material culture analysis. In the late 1700s, fashion was more than a matter of simply clothing the body for warmth and decency; it spoke volumes about the wearer's place in society, his or her beliefs and political leanings, and his or her apparent financial security. Everything about a person's dress said something about the wearer, whether it was the color, the materials, the cut and style, or even the

buttons (Haulman, 2011; Marchand, 1999; Baumgarten, 2002). For example, in the late 1700s men's fashion dictated elaborately embellished and embroidered buttons on formal court coats, implying that the wearer was rich enough to afford such luxury and of social standing high enough to attend court (McKenzie, 2004). Thus, analyzing the clothing of the late eighteenth century can reveal much about the society, more so than paintings, which often exaggerate the subject to appear as he or she wished to appear. According to Nevison, "only a costume collection carefully displayed can demonstrate three-dimensionally the actual appearance of historical characters" (as quoted in Fyre, 1977, p. 39). A material culture approach has the ability to combine an analysis of the physical characteristics with the social implications of the clothing, all the while relating the garment to its cultural context. Furthermore, specific clothing is worn in specific social situations. By analyzing clothing from a material culture approach we can deduce both the social function of the garment and its wearer's personal beliefs.

Miller (2008) describes three theories of material culture established by Latour, Gell, and Hegel. Latour's theory of material culture suggests that it is not the object or even the human experience of the object that matters, but the concepts and relationships between objects. In contrast, Gell's theory focuses more on the human agency behind the object. Hegel's theory is somewhat in between the theories posed by Latour and Gell – he argues that while humans may create an object, that object continues to create the human. That is to say, we create and then interpret and learn about ourselves through our creation.

There are two approaches to material culture methodology. The first is an object-centered approach, which is further split into two categories – one that is focused on the

physical attributes of an object, and one that is focused on an art historical approach. Prown (2001) has coined the terms *farmer* and *cowman* to describe researchers who follow either the first or second method. *Farmers*, or those focused on the physical attributes of an object, are concerned mainly with the materiality and function of the object. *Cowmen*, or those who take an art historical approach, are focused more on the cultural belief system that created the object. Harvey (2009) further clarifies this division: an object-centered approach looks mainly at “technological development, typologies, and the aesthetic qualities of taste and fashion” in order to draw conclusions. The first method of this approach – the one that is only focused on the physicality of an object – often draws conclusions about the object by comparing it with other objects. This method requires the researcher to be a “connoisseur” of the subject. The second method – the art historical method – looks at how the physicality of the object provokes an emotional response. Prown (as cited by Harvey, 2009) outlines the steps taken in an object-centered approach, which can apply to either of the two subcategories: a thorough examination and description of the object is followed by “deduction,” where relationships between the object and people are considered. Finally, the researcher seeks to determine “why the object is the way it is, or provokes the way it provokes,” and forms hypotheses which are then tested in a process Prown terms *speculation*.

The second approach to material culture is an object-driven approach. In this method, Harvey (2009) states that “objects [appear] as evidence of other complex social relationships”. This approach relies more heavily on other forms of evidence rather than the object alone, such as written documents, to make inferences about a culture or society. The

art-historical method, described above, also relies somewhat on other forms of evidence, and thus falls in between a purely object-centered and purely object-driven approach.

Crane and Bovone (2006) describe five ways in which material culture can be used to analyze fashion and clothing. The first approach is based on the assumption that the values of a culture are expressed by their clothing, and therefore, clothing “can be interpreted as a type of visual text” (p. 321) that illustrates these values. For example, the typical Amish dress is so traditional and conservative in style that it relates more to the 1800s than today, illustrating their likewise traditional values and rejection of a modern lifestyle.

A second way that material culture can be used to analyze fashion is to look at the fashion industry itself. According to Crane and Bovone (2006), the fashion industry finds it necessary “to innovate by altering the symbolic values attached to styles of clothing,” while at the same time, making sure that the clothes that are produced still relate to consumer’s values. The fashion industry further provides an interesting case for using material culture since it is not just one person assigning these values, but a whole system of people making decisions to produce a final product.

Along these same lines, another way in which material culture can be applied to fashion is to look at how the fashion industry disseminates meaning through media. In other words, once the fashion industry has decided which values to assign to its products, how does it present these values to the public? This in turn leads to yet another way material culture can be used to analyze the industry – once these values have been distributed to the public, how do consumers respond to these values, and how do they assign their own values? Lastly,

material culture can be used to determine how the values of consumers differ between cultures and countries (Crane and Bovone, 2006).

2.5b| Justification for and previous use of material culture methodology

Historical costume scholars such as those described below illustrate the value of taking a material culture approach in analyzing garments. While there are several theories and methodologies of material culture, this research followed Prown's object-centered methodology and Hegel's theory of material culture (as outlined by Miller, 2008). An object-centered approach was chosen because this research is focused mainly on analyzing the three knitted coats in order to determine their most likely role in both society and the technological advancements of the industrial revolution. In this way, the research aligns to the *farmer* mind-set rather than the *cowman* or art historical approach, since the primary focus is not on the cultural beliefs of the maker or wearer of the coats at this time. Furthermore, the literature has shown that Prown's methodology is a common and successful way to analyze objects. In addition, this research follows Hegel's theory of material culture – that humans create and are in turn created by their objects – since the goal of this research is to learn more about the particular culture that created the three coats and how these garments impacted that culture.

In addition, this research will cover the first and second approaches outlined by Crane and Bovone (2006). While this research is not so much concerned with the societal belief system implied by the three knitted coats, the garments still serve as a text that can be read to determine their social function. The fashion industry during the late eighteenth century can also be interpreted through these three coats by making deductions based on the construction

details of the garments and consumption patterns of the public as revealed through secondary sources.

Several researchers of historical costume have followed Prown's material culture methodology and have demonstrated the value of an in-depth object analysis. Lou Taylor (2007) is one such scholar to have used a material culture approach – in her research, she thoroughly describes three 19th century women's woolen garments in order to make deductions about their social function. In her description of the objects, she notes the fabric, trimming, and construction methods used. Using written primary sources from the same era, she places the garments in context, illuminating the changes society was undergoing, the influence of society on dress, and the leisure activities of the wealthy. These sources also describe the types of garments women typically wore for such leisure activities. After describing the cultural context of the garments, Taylor compares and contrasts the functional and aesthetic details of the garments to those typically found in walking and shooting/fishing clothes to deduce that the three garments were worn for country walking in Scotland. The wearer of two of the garments is known, which allowed Taylor access to primary sources that helped her relate the wearer's dress to her personal beliefs: the garments were specific to holiday wear in Scotland for three months out of the year, and Scotland was viewed as the playground of the wealthy. In addition, the owner of the garments clearly followed the rules of society and participated in societal activities such as country walking, but was "confident enough to tweak the rules with her antique trimmings." (Taylor, 2007, p.103).

Linda Matheson (2011) also follows Prown's material culture methodology in order to apply two modern western theories of culture and fashion to eastern dress. Although the

goal of Matheson's research was different than Taylor's – Matheson sought to explore the applicability of western theories to eastern dress while Taylor aimed to determine the social function of three garments – their approach was the same and both might be considered “farmers”. Like Taylor, Matheson also painstakingly described the details of dragon iconography in 17th century Chinese imperial dress. She made particular note of design details such as balance, harmony, rhythm, color, size, silhouette, and posture of the dragons, and compared and contrasted garments from times of social and political peace to garments from times of unrest. Finally, Matheson used written documents from the same era to place the garments in a social and political context.

Research by Leslie Shannon Miller, (2000) a student of Prown's, shows yet another example of how material culture can be used to gather information from an object from a “cowman's” perspective. Rather than seeking to deduce the purpose of a garment like Taylor, Miller focuses more on deducing the societal beliefs of the wearer from the garment. Using the same methodology as described before (documenting the construction, material, functional, and aesthetic details; making deductions from this analysis, and supporting these deductions with written evidence) Miller is able to conclude that the corset “broadcasted” a certain attractive image to society (ranging from harlot to enticing virgin), but more importantly, gave the wearer a role in society as a fertile woman who was dependent upon others and who accepted that role by choosing to wear a corset.

Beverly Lemire (2009) provides additional examples of the value of object-analysis. She describes how the tree of life motif in Indian 17th and 18th century Indian textiles resonated with rural English society – floral motifs had already been entrenched in English

culture, and the tree of life symbol represented fecundity, which was appropriate to the bedroom. Indian calicos were perfect examples of the growing global trade, as textiles from India were infiltrating even the most private areas of British life. Lemire also provides a second example of object-analysis, in which examination of the construction of an eighteenth century petticoat revealed a division of labor. This division of labor, in conjunction with the detail and quality of the petticoat, revealed evidence of ready-to-wear articles for the upper class as well as the lower class.

Finally, Ruth Gilbert (2012) uses Prown's material culture methodology to determine what can and cannot be deduced from a garment. In her research, she carefully describes a baby's jacket from the late 17th to early 18th century and includes such details as the yarn used, courses and wales of the knitted fabric, construction details of the garment, aesthetic pattern details, and an evaluation of the skill required to make the garment. Like Matheson and Taylor, she also compares the garment to similar surviving examples and cites primary written documents from the era to place the object in context. Her research reveals that an object-analysis of the jacket can reveal that it was made by a skilled worker most likely in south-western England, bought for the future use of an infant, and hardly, if ever worn. Most importantly, Gilbert's research reveals that there was "a localized industry supported by regional trades [that] apparently came and went without leaving a paper trail..." (p. 104). While a material culture analysis of an object may not be able to reveal who made, sold, and bought the jacket, the crucial point is that such an analysis can document objects that illuminate evidence of an activity or belief system where a paper trail vanishes.

These researchers have illustrated the value of choosing a material culture approach in analyzing historical garments. The research of Gilbert, Taylor, and Matheson are particularly relevant to this research as very similar methods will be used. The following methodology section will further elaborate on the techniques selected to analyze the three machine-knitted coats.

CHAPTER 3| METHODOLOGY

3.1| THE OBJECT-CENTERED METHOD

The purpose of this research was to analyze three machine-knitted men's coats from the second half of the 1700s in order to relate the garments to the cultural, technological, and sociological context of the late eighteenth century. In order to do so, this research followed the object-centered material culture approach outlined by Prown (2001). First, each coat was described in detail, noting the measurements, materials, construction, and aesthetic details of each. Second, deductions were made about the coats based on intellectual engagement – this mostly applied in drawing conclusions about the fit, comfort, and functionality of the coats as implied by the measurements of and materials used in the garments. Prown suggests noting the emotional response that an object triggers as part of the deduction stage, but for this research, this component was omitted since such information would be more relevant to determining the beliefs of a culture, which was not the focus of this research. Next, conclusions were drawn based on the data collected in the previous two steps in order to determine the sociological and cultural context of the coats (Prown, 2001). Finally, external evidence in the form of other garments and newspapers dating to the era were used to support the conclusions drawn in the previous step.

3.2| DATA COLLECTION

Although it would be ideal to take the same measurements on each of the three coats, a slightly different data collection method was used on the Berrington Hall coat due to travel and time constraints. Some of the measurements for the BH coat were taken on the paper

pattern made by Stephanie Kemp if they could not be determined from pictures taken by the research team – these measurements are indicated in Table 1.

Before visiting the DeWitt Wallace Museum, a list of relevant measurements and details to note was made. This list was based on the measurements that a bespoke tailor would typically make in addition to details that are likely to vary between coats, such as trim, lining or the design of the buttons. This same list was used to collect data at both the DeWitt Wallace Museum and at the Museum at FIT using an inch-tape measure with the metal end removed. This same list was used to derive measurements from either images of the BH coat or from its patterns. Images were taken with a digital camera for clarification and measurements were documented in an Excel spreadsheet file. The following table describes the measurements taken. A * symbol indicates the measurement was taken on the pattern for the BH coat. Table 2 documents the aesthetic details that were noted for each of the three coats.

Table 3.1. List of measurements taken for each knitted coat.

1. Collar depth at center back neck*
2. Collar depth at center front edge*
3. Collar length at top*
4. Collar length at bottom*
5. Sleeve length*
6. Bicep diameter*
7. Sleeve diameter at wrist*
8. Cuff depth at top of arm
9. Cuff depth under arm*
10. Cuff length at top
11. Cuff length at bottom
12. Cuff depth unfolded (measured from the sleeve lining to the outside top edge of the cuff)*
13. Diameter of buttons
14. Length of braiding
15. Width of braiding
16. Length of fringe
17. Width of pockets at top*
18. Width of pockets flaps*
19. Depth of pockets
20. Width of pocket flap, taken at the top of the flap
21. Location of pocket on body, measured from the edge of the hem to the top of the pocket flap*
22. Depth of pocket flap, taken at the center of the flap and at each edge of the flap
23. Length of coat front, measured both from the high point of shoulder and the back-shoulder seam
24. Length of center front opening, measured from the center front neck around the curve of the coat to the hem*
25. Across chest front at armscye, measured at the tendon level *
26. Across chest front at underarm level*
27. Length of center back and length from center back neck to top of vent*
28. Across back at armscye, measured from the level of the back sleeve-body seam*
29. Length of pleats*
30. Total sweep of hem, measured with pleats open at both the entire sweep of hem from center front to center back, and at the front piece of the skirt alone
31. Skirt panels at widest point*
32. Widest point on body, taken at the widest possible point that the width of fabric could be
33. Armscye to center back neck, taken over the shoulder*

Table 3.2: List of aesthetic details noted for each knitted coat.

1. Courses and wales per inch, measured and counted using an inch-tape or pick glass
2. Outer material and color (color matched to a Pantone chip)
3. Lining material and color
4. Interfacing material
5. Padding material
6. Seam locations
7. Pleat and vent construction in the skirt
8. Presence and location of diamond marks formed with holes
9. Texture and finishing of outer material
10. Number and location of sewn and open button holes
11. Contents of pockets
12. Braiding and fringe technique
13. Pocket shape

The aesthetic details were important to note since they have implications as to the technological, social, and cultural context of the coats. For example, the coarseness or fineness of the knit gauge will determine how technologically advanced was the stocking frame used to make the outer fabric of the coats; the greatest width of knitted fabric will tell of the width of stocking frames; if the garment construction details are identical it might hint that the same manufacturer made the coats; aesthetic details such as color help determine if the coat was in style or not, since each decade was known for certain colors; and the type of material used will speak to the both the probable end use of the coats and the financial situation of the owner.

In addition to the machine-knitted coat, the Museum at FIT also had a matching machine-knitted waistcoat in its collection. Measurements and aesthetic details of this

waistcoat were also described, mostly for documentation purposes. The waistcoat, however, also served to indicate how the knitted coats might have been worn.

A waistcoat and pair of breeches, both machine-knitted and housed at the Victoria and Albert Museum (V&A), were analyzed for comparison of knit structures. The waistcoat was picked for study because it was the only machine-knitted upper body garment from the eighteenth century that could be found for comparison to the three coats. The breeches were selected for study because they represented a typical style of knitted breeches from the late eighteenth century and demonstrated a different knit structure (that may or may not have been common) than was apparent in any of the three coats. Furthermore, these two items exemplify some of the knit structures obtainable through eighteenth century machine knitting and illustrate the types of garments that were made using machine-knitted fabric. Due to constraints by the V&A, handling and direct measurement of the garments were not possible. Thus, a measuring tape was laid beside the garments and relative measurements were extrapolated where possible. The construction and aesthetic details were documented with pictures, while the V&A documentation provided information on the materials used for the outer fabric and lining.

In addition, three woven coats, also from the V&A, were examined in order to compare and contrast the differences or similarities in style and construction between typical woven coats of the eighteenth century and the three knitted coats. These two coats were chosen because they have aesthetic details that are similar to the knitted coats and because they represent the typical style of a man's every day informal coat in the late eighteenth century, as illustrated by Black (2012) and Baumgarten (2002). As with the knitted garments,

direct measurements were not possible (in accordance with V&A object viewing rules) and were extrapolated where possible. Measurements for all of the V&A garments, however, were not crucial for this study as these garments only served as standards for style or examples of knitting capabilities. For both coats, pictures were used to document aesthetic details such as buttons and fringe as well as construction details such as vent and pleat construction, although due to environmental lighting, these pictures are not accurate in regards to color. The V&A provided information about the materials used in each coat.

3.3| ANALYSIS OF DATA

The data collected above was analyzed in three ways. First, the three knitted coats were compared and contrasted to each other. The measurements of all three coats were compared to rule out the possibility that the same person owned them and to gain a better understanding of the style of the coats as well as the body shapes of the men who did wear the coats. Most importantly, the measurements in proportion to each other within one coat determined the fit and silhouette of each coat, which implied how, for what reason, and during what era the coats were worn. Next, the construction methods of the coats were examined. Specifically, the general locations of the seams; construction of the skirt pleats, cuffs, pockets, and vents; materials used for the lining, outer shell, and padding; and gauge of the knitted fabric and finishing techniques were compared. If these construction details are highly similar or identical, it would imply that the same person or group of persons made these coats. These construction details, especially the materials used, also hint at the functionality and comfort of these garments. Lastly, the aesthetic details of each coat were

compared, including the construction, location, and number of buttons; construction and location of the braiding and fringe; shape of the pocket flaps; number of sewn and unsewn button holes; presence and location of a diamond mark made by oilets or “miss” stitches where the loops are held to create holes in the fabric; and general shape and silhouette. These aesthetic details in particular may suggest how fashionable the coats might have been during the late 1700s, thereby helping to place them in a sociological and cultural context.

Secondly, the three coats were compared both to each other and to other knitted garments of the late eighteenth century with specific emphasis on the jacket and breeches mentioned above. This analysis will focus on the variety of knit structures obtainable during the times; the diversity of knitted garments; and the aesthetic application of various knit structures in such garments. An examination of the knit structures and the fabric width available as compared to knit structures used in other garments of the same era will place the three coats within a technological context.

Lastly, the woven coats described above will be used as a “control” from which to analyze the three knitted coats. As it was specified above, the same construction and aesthetic details will be compared between each woven and knitted coat. While the woven and knitted coats may not have identical embellishments, the locations and materials of such embellishments will be compared. In particular, the statements and styles of these details among all the coats will be noted. This investigation will further solidify the sociological and cultural context of the three knitted coats.

3.4| INCLUSION OF OUTSIDE DATA

As Prown's material culture methodology illustrates, inclusion of data outside of the material object(s) helps verify the hypotheses derived from object analysis alone (Prown 2001). Therefore, this research has also used newspaper articles from the late eighteenth century to provide further evidence as to the prevalence of knitted outerwear and knit technology during the era. The following four searches were conducted in both the Burney Collection and America's Historical Newspaper databases from 1760-1800: *first*, for simply "knit*;" *second*, for "knit* coat," OR "knit* shirt," OR "knit* suit," OR "knit* waistcoat," OR "knit* frock," OR "knit* jacket," OR "knit* vest;" *third*, for "stocking frame" OR "knitting frame;" and *lastly*, for "knit* cloth*," OR "knit* cloath*," OR "knit* fabric," OR "knit* drap*". The first search was a general search to establish how many records might mention knitted items; the second search was specifically focused on looking for knitted upper body garments; the third search was focused on finding records about the dimensions of stocking frames; and the last search was focused on determining if machine-knitted cloth was sold by the yard (both cloth and cloath spellings were searched in order to account for differences in language). Lastly, these two databases were used because they are they hold the largest collection of digitized eighteenth century newspapers and are easily searched using keywords.

CHAPTER 4| RESULTS

4.1| INTRODUCTION

Using the methods described in the previous chapter, the three knitted coats were each analyzed individually by the author with the help of data gathered by the research team. The Berrington Hall Coat was viewed several times by Professor Nancy Powell, Mark Hutter (Senior Tailor at Colonial Williamsburg), and Stephanie Kemp; the FIT coat was viewed by the author, Mark Hutter, and Nancy Powell; and the DeWitt-Wallace coat was viewed by the author, Nancy Powell, Mark Hutter, and Linda Baumgartner (Curator of textiles and costumes at Colonial Williamsburg). This analysis included an in depth look at their construction, measurements, trimmings, and fabric use. An examination of three woven coats from the V&A by the author based on data collection by Dr. Katherine Annett-Hitchcock and Professor Nancy Powell followed, focusing on the construction, materials, and trimmings used. Next, two machine-knitted garments, including a pair of breeches and a waistcoat, were analyzed by the author based on data collected by Dr. Annett-Hitchcock and Professor Powell, with specific attention paid to the knitted fabric structure. Finally, the results from newspapers of the late 18th century were included.

4.2| RESULTS FROM KNITTED COATS

4.2a| The DeWitt-Wallace coat This coat came to the New York dealer Cora Ginsburg LLC from a Sotheby's auction in 1998 and is said by the dealer to originate from England. Later in the same year, the Colonial Williamsburg Foundation (CWF) purchased

the coat. It is currently housed in the DeWitt-Wallace Museum in Colonial Williamsburg, Virginia.

Dated by the CWF to have originated between 1785 and 1810, the coat is made of a smooth, black worsted knit and lined throughout with black silk twill except for the sleeves and upper back, which are lined with plain-woven linen (all fibers confirmed by the CWF). The knitted fabric is a plain jersey construction, with 32-34 courses by 26-28 wales inch (Figures 4.1 and 4.2). Plain-woven linen and a black buckram make up the interfacing of the coat, which can be seen through a large tear in the outer fabric (CWF, all fibers confirmed by microscope at time of purchase; Figure 4.3). In fact, the coat is in poor condition, with several buttons missing and a few stained areas.



Figure 4.1. Wales per inch, DW coat.



Figure 4.2. Courses per inch, DW coat.

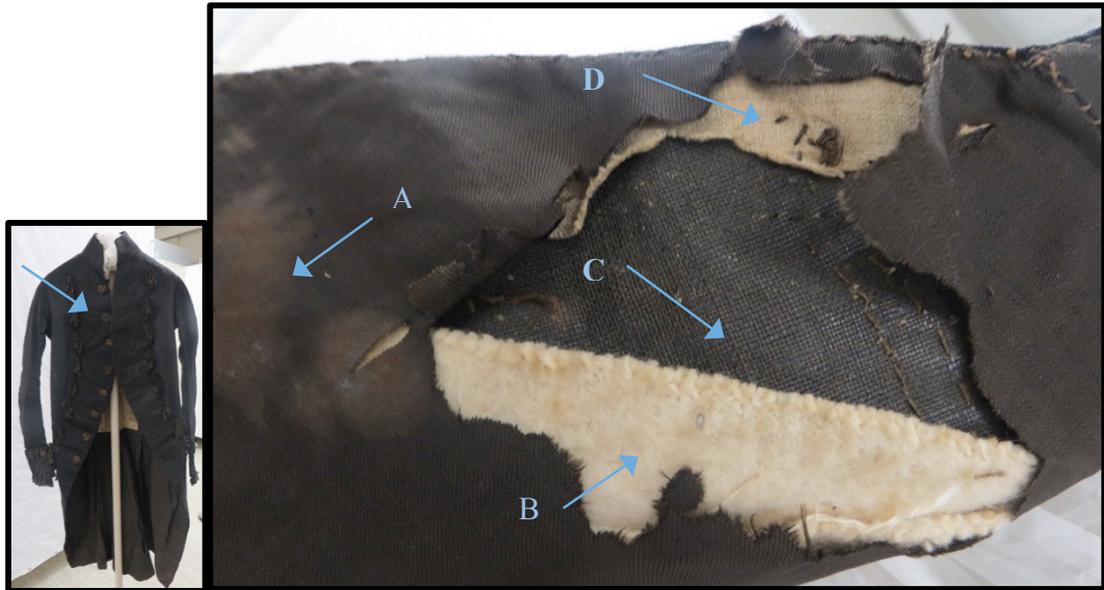


Figure 4.3. Layers of the DW coat from a tear on the inside of the wearer's center front right. Stains (A), padding (B) and two layers of interfacing can be seen (C and D) (left).

The coat has a standing collar, narrow sleeves that end in narrow cuffs, and a skirt that is pleated at the sides with a vent at the center back. The chest of the coat is padded with heavy napped cotton, while the center front of the coat is cut so that it curves away to the sides of the wearer. There are eight flat, black buttons on the wearer's right center front, which have been embroidered in a basket-like pattern. Both the buttons and the corresponding buttonholes are further decorated with a black braided frogging with a silk fringe at the end. The first buttonhole is sewn closed while the next three buttonholes are open; the remaining buttonholes are also sewn closed. The pockets on both sides of the coat have scalloped pocket flaps, which are embellished with three closed buttonholes and the same frogging and fringe seen on the center front of the coat. Three corresponding embroidered buttons are located just under each pocket flap. Likewise, the sleeve cuffs are

decorated with three of the same buttons, frogging, and fringe; the fringe has been placed so that it hangs down over the edge of the wrist. A button is also located at the top and bottom of the two pleats in the skirt, although the top button, but not the bottom, is decorated with fringe. Figures 4.4 and 4.5 show the locations of these details on the front and back of the coat.



Figure 4.4: The front of the DW coat, showing the locations of the buttons, tassels, and froggings. The general silhouette of the coat can also be seen, with a cut-away front and standing collar.



Figure 4.5. The back of the DW coat, showing the locations of the seams, buttons, tassels, and skirt pleats.

The coat was constructed with mostly linen thread sewn in backstitches, although there is some silk thread. Slanted stitches were sewn from the lining side of the front and hem

of the coat, which appear as topstitching on the outer, knitted fabric (Colonial Williamsburg Foundation, curator work sheet, 1998). The sleeves of the coat are curved to the shape of the wearer's arm with a seam located along the front and back of the sleeve. The cuffs of the sleeve cannot be unfolded, but are sewn down to the sleeve. The shoulder seams of the coat have been set in the back. The collar of the coat has been attached in two pieces with a seam at the center back neck. The back of the coat also has a seam running down the center back, which ends in a vent that overlaps on the wearer's right. The coat has been contoured through the use of princess seams to attach the side front pieces to the back pieces. These princess seams start where the seam of the sleeve meets the back of the body, and ends at the top of each pleat. Extensions to the back panels of the coat were made to construct the pleats, rather than the use of a wedge shaped insertion (see Figure 4.6).



Figure 4.6. Outer pleat construction from the back of the skirt from the DW coat (right). Back of the coat (left) shows the location and orientation of the pleat pictured (right).

In addition, three small diamonds formed in the knit structure of the fabric were found near the hem in the skirt on the wearer's right. Two of these diamonds are located in the center of the right side panel at the hem, while the third is located next to the button at the bottom of the pleat (Figure 4.7 shows an example of these marks). The coat has further singularities – the finishing of the outer fabric differs between the left and right sides. The wearer's right side appears to be slightly darker, while the wearer's left side appears as a faded brown. The fabric on the right side also has a slight sheen, while the fabric on the left has a matte appearance. Lastly, two black-dyed wooden buttonmolds were found in one of

the pockets of the coat, although they are not embroidered. Table 4.1 (page 65) provides a list of all the measurements taken of this coat along with measurements of the FIT and Berrington coats.

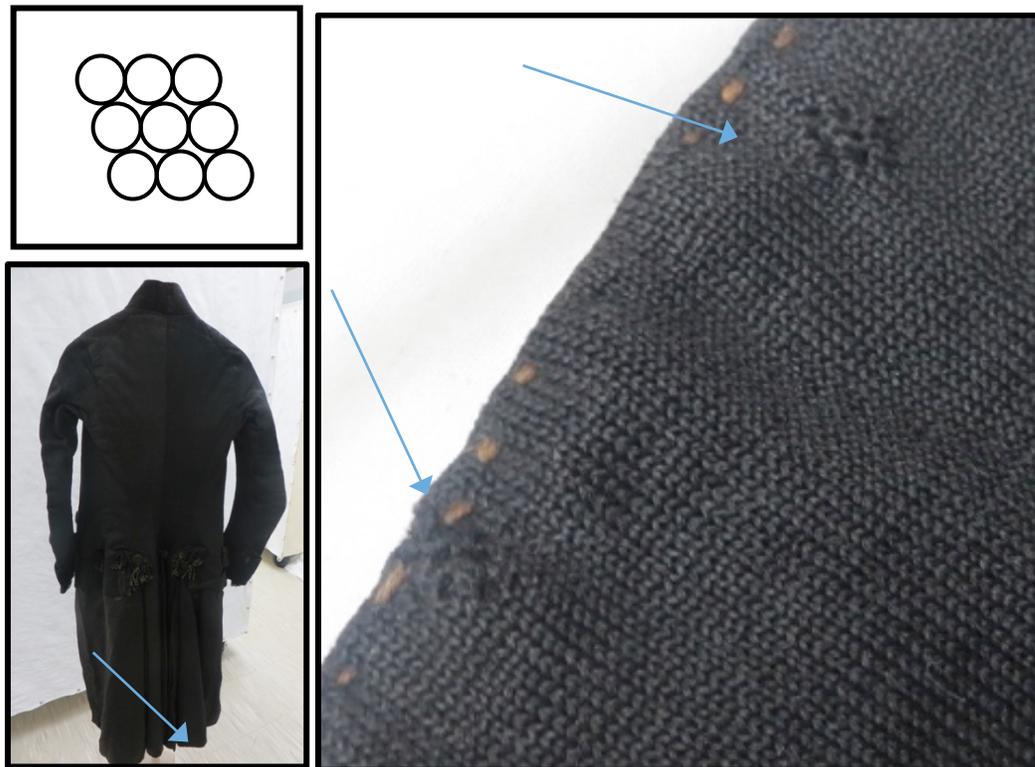


Figure 4.7. Two diamond marks appear at the hem of the coat's skirt, highlighted by arrows (right). The image of the back of the coat (left) shows the location and orientation of the marks. The upper left corner shows a diagram of the marks.

4.2b| The Berrington Hall coat Collected by Charles Wade in the early 20th century, this coat is currently housed at Berrington Hall in Herefordshire, England as part of the National Trust's Snowhill Wade Costume Collection. The coat is made of worsted machine-knit fabric that is described as beryl-blue in color and is lined with two different weights of cream silk twill (according to the National Trust documentation). The knitted fabric is of a

smooth, non-felted plain jersey with 32-34 courses by 24-25 wales per inch. (Figures 4.8 and 4.9).

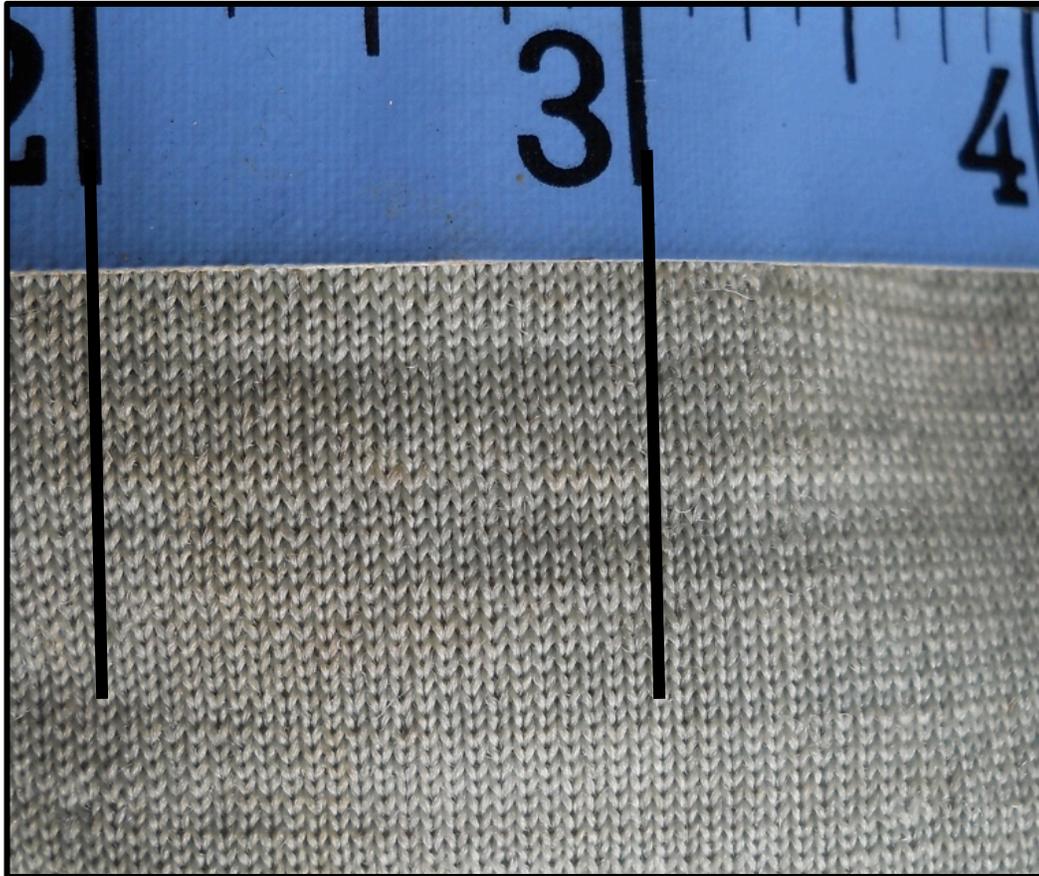


Figure 4.8. Wales per inch, BH coat.



Figure 4.9. Courses per inch, BH coat.

Like the DeWitt-Wallace coat, this coat also has a bleached, linen lining in the sleeves and upper back, although there has been some re-lining to the coat (Berrington Hall). Unbleached linen composes the interfacing of the coat, while the chest is padded with layers of pink and red glazed wool (according to Berrington Hall conservators). The coat is in fair

condition with no major rips or tears except for in the lining at the entrance to the wearer's right sleeve. There are no missing buttons or pieces of braiding or fringe, although there is considerable fading or staining across the shoulders on the back of the coat. A wedge-shaped swatch of knitted fabric with a button with basket embroidery was found in one of the pockets. This swatch appears to be is of the same knitted fabric used on the coat, but has been protected by light and is thus un-faded. Under natural daylight (summer in Midlands of England), variation in the color is evident and depending on the area of the knitted structure the color and closely corresponds to Pantone chips 14-5706 TPX, 16-5808 TPX, or 15-5706 TPX depending on the area, light, and the viewer (Figure 4.10). In addition, both the outer coat fabric and the swatch found in the pocket have unevenness in yarn color, making it difficult to precisely match to just one color.

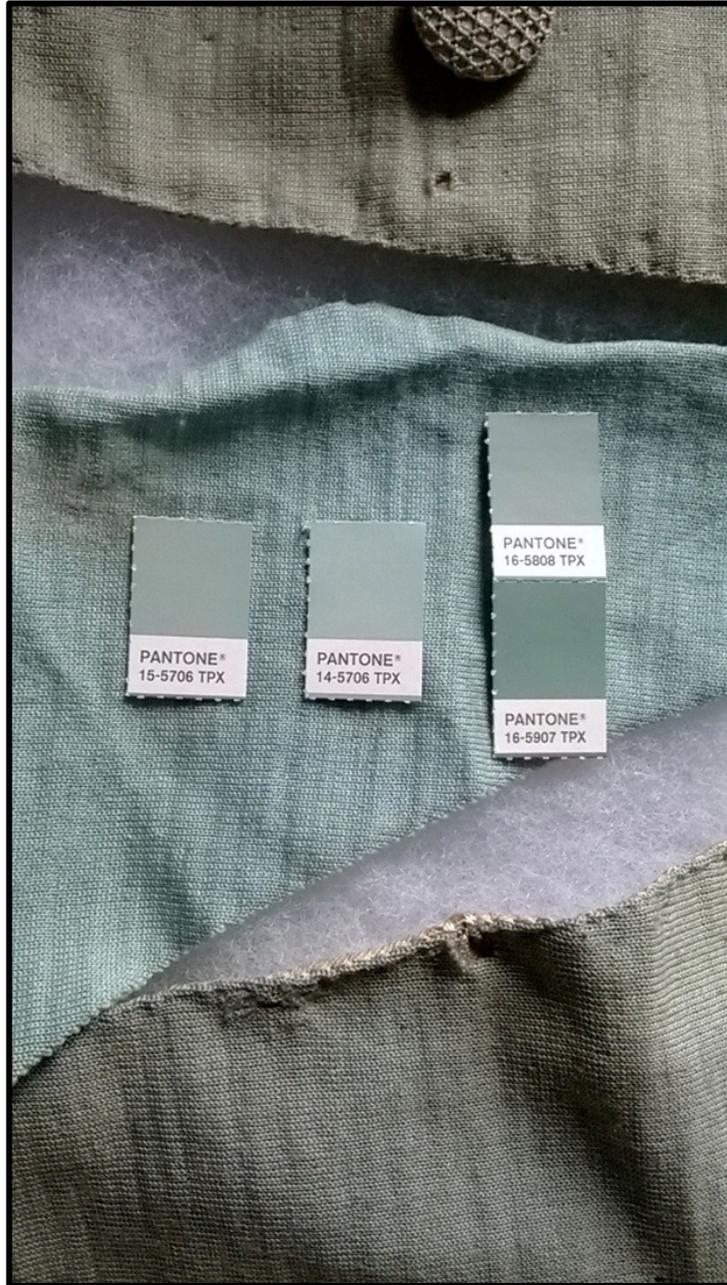


Figure 4.10. Swatch (middle) in comparison to the BH coat (top and bottom).

The coat is dated to 1780-90 by BH documentation and has a standing collar, narrow curved sleeves that end in a narrow cuff, a skirt with pleats on either side and a vent that

folds to the wearer's left, and a center front that is padded and cut away to the sides of the wearer. It is decorated with eight flat buttons down the wearer's center front on the right side, which have been embroidered with a basket-like stitch in cream, silk thread. Both the buttons and the corresponding buttonholes have rows of braided cream frogging and fringe (the buttons, braiding, and fringe may have once been a pale blue as described by the National Trust, but now appear faded to cream). Only two buttonholes have been cut open and are functional, and there is also a steel hook-and-eye closure at the chest. There are two of the same buttons with corresponding braiding and fringe on each cuff; the fringe has been placed so that it drapes over the wearer's wrist. There is a pocket with a scalloped pocket flap on either side of the coat; the flaps have likewise been embellished with three rows of the braiding and fringe. There are three sewn buttonholes on each pocket flap with three corresponding embroidered buttons just underneath, though the buttons are not functional. A button is also found at the top and bottom of the pleats on either side of the skirt, although the top button is further decorated with fringe and braiding.

The sleeves of the coat are slightly curved to the wearer's arm with a seam down the front and back. The cuff of each sleeve is sewn down so that it cannot be unfolded. The shoulder seams of the coat have been set in the back, rather than placed on the top of the shoulder. The collar has been constructed in two pieces, with a seam at the center back neck. The back of the coat also has a seam running down the center, and is contoured by princess seams where the front side pieces meet the back panels. These princess seams start halfway between where the sleeve seam meets the back and the underarm, and they end at the top of each pleat. A wedge shaped piece of knitted fabric has been inserted to make each pleat, and

just to the right of the right pleat there is a diamond mark, made of nine small holes, similar to those found in the DeWitt-Wallace coat. Figure 4.11 shows the outer pleat construction while Figure 4.12 depicts the diamond mark. All of the measurements for the coat are displayed in Table 4.1, along with the measurements for the other two coats.



Figure 4.11. Outer pleat construction in the BH skirt at the back of the coat (right). The image of the front and back of the BH coat (left, source: National Trust Collections online, 2015) shows the location of the pleat shown (right).

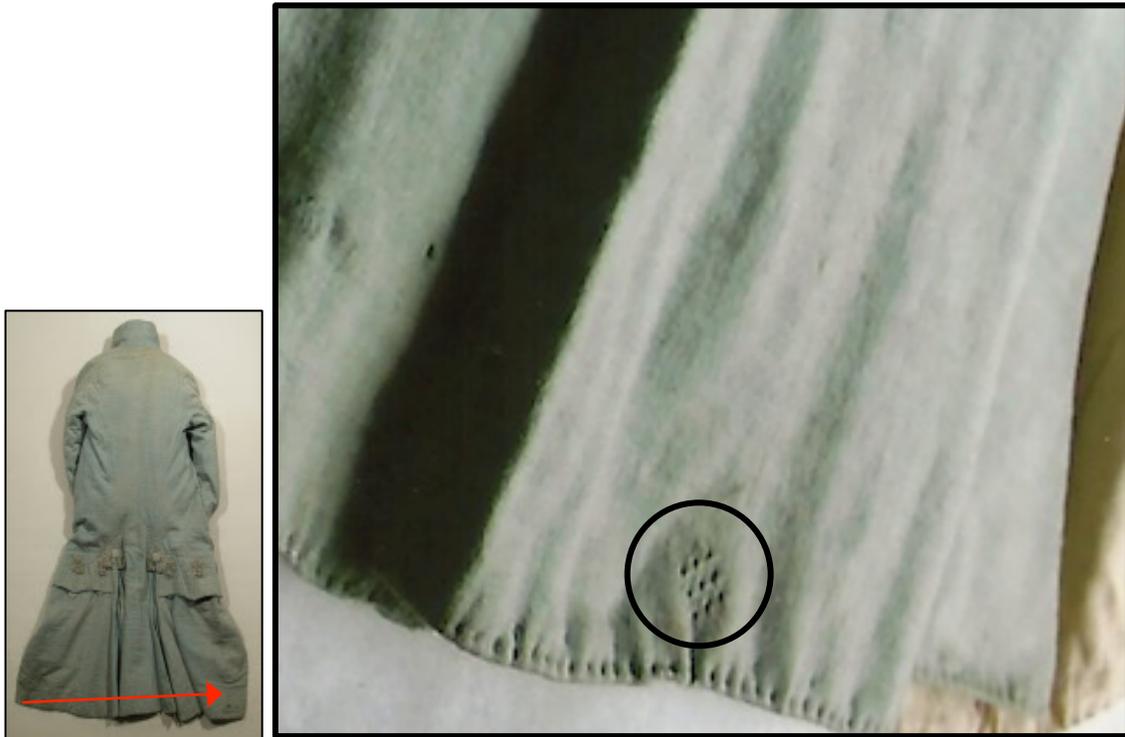


Figure 4.12. Diamond mark at the hem of the BH skirt in the back of the coat, circled in black (right). The back of the BH coat shows the location of these marks (left, source: National Trust Collections online, 2015).

4.2c| The Fashion Institute of Technology Coat The third coat is currently housed in the Museum at the Fashion Institute of Technology (FIT) in New York, New York and is paired with a matching waistcoat. Purchased from Cora Ginsburg, LLC., the Museum describes the coat and weskit as English livery and has displayed the set twice in the exhibits *She's Like a Rainbow* (2006-2007) and *Fashion and Technology* (2012-2013). The coat is in fair condition with no major rips or repairs, although some conservation netting has been added to stabilize the left inside edge of the coat opening and there is some fraying in the lining. Both the coat and its matching waistcoat are made with a wool jersey knit fabric with a gauge of 32-34 courses by 26-28 wales per inch (the waistcoat will be described in more detail after

the description of the coat). This knit fabric has faded unevenly – different pieces of the coat appear as different colors, as illustrated later in Figure 4.17. Furthermore, the wool knit fabric has not undergone extensive finishing, such as felting, as the knit structure of the fabric can still be seen. The coat is lined throughout the skirt with what appears to be silk or silk-blend dark brown twill, although it may have once been black to match the outer knit fabric. The back and sleeves of the coat are lined with a plain woven fabric that could be either linen or cotton, or a mix of both. Black buckram interfaces the coat throughout, and some very light padding can be felt through the outer fabric in the upper chest. Figure 4.13 depicts a small tear in the twill lining through which the buckram can be seen.



Figure 4.13. The buckram interfacing can be seen through a tear in the twill lining of the inside of the FIT coat's skirt at the hem (right). The image of the FIT coat (left) shows the location of this tear.

Dated by the Museum to 1780-1800, the coat has a standing collar, slender sleeves with shallow cuffs, a center-front which is cut away to the sides, a pocket with scalloped pocket flap on either side, and a skirt with a center vent and two pleats placed in the back. The pleats have been constructed through an extension of the back panels and held together with a thick thread, or swing-tack (Figure 4.14 shows the outer pleat construction), while the center vent overlaps to the wearer's right. The narrow back panels of the coat are attached with princess seams to the sides of the front panels. These seams begin midway between the armhole and underarm of the sleeve and end at the top of each pleat. The shoulder seams have been set slightly to the back of the coat, rather than on the top of the shoulder. Lastly, each sleeve is constructed with a front and back seam (Figure 4.15 shows the front of the coat while Figure 4.16 shows the back).



Figure 4.14. Outer pleat construction in the back of the FIT coat's skirt (right). Image of the back of the FIT coat (left) shows the location of the pleat (right).



Figure 4.15. Front of the FIT coat with waistcoat underneath.



Figure 4.16. Back of the FIT coat, illustrating the construction of the coat and the uneven fading throughout.

Eight buttons with basket embroidery are placed down the center of the coat on the right side. Braiding and tassels, most likely of silk, extend out from each button and buttonhole. Only the second, third, and fourth buttonholes are cut open and functional. These buttons with coordinating frogging are also found on the rest of the coat: two of this set appear on the cuffs with the fringe oriented so that it dangles over the wrist; three faux buttonholes with frogging are found on each pocket with two embroidered buttons just under each pocket flap; and the same button is found at the top and bottom of each pleat, with the top button further embellished with triangular braiding and fringe. A third button appears to have once been under each pocket flap but has been lost or removed over time – some thread remains in the place of where a third button should have been. Interestingly, the pocket bag has been removed from each pocket, as shown in Figure 4.18. No diamond marks were found anywhere on either the coat or the waistcoat. In addition, there are two thick threads, almost yarn-like, between the second and third froggings on the wearer's left side. These threads create a loop on the outside of the coat and are anchored at either end on the inside of the coat. Figure 4.17 shows these threads as well as a thin permanent crease in the fabric. All of the measurements for this coat are displayed in Table 4.1.



Figure 4.17. This image shows the two thick threads between the froggings and the permanent crease, highlighted by an arrow (right). Image of the front of the FIT coat (left) shows the orientation of the threads and permanent crease.



Figure 4.18. The pocket bag and the third button have been removed from each pocket of the FIT coat.

Table 4.1. Measurements of the DeWitt-Wallace (DW), FIT, and Berrington Hall (BH) coats.

#	ITEM	DW MEAS.	COMMENTS	FIT MEAS.	COMMENTS	BH MEAS.
	<i>Collar</i>					
1A.	Collar depth at center back neck	2 ¼ in.		1 ¾ in.		3 ⅜ in.
1B.	Collar depth at center front edge	2 ⅜ in.		1 ⅝ in.		3 ⅝ in.
2A.	Collar length at top	12 ⅜ in.		13 ½ in.		13 ¼ in.
2B.	Collar length at bottom	17 ⅜ in.		16 in.		15 ½ in.
	<i>Sleeve</i>					
3.	Sleeve length	26 ⅜ in.		26 ¼ in.	Shoulder seam to bottom of cuff	22 ¼ (not including cuff); 26 ½ with cuff
4.	Sleeve max diameter	5 ¼ in.		6 ½ in.		7 ¼ in.
5.	Sleeve diameter at wrist	4 ¾ in.		5 ½ in.		5 ⅝ in.
6A.	Cuff depth at top of arm	3 9/16 in.		4 in.	About 5 in.	4 ½ in.
6B.	Cuff depth under arm	4 1/16 in.		4 ¼ in.		4 ½ in.
7A.	Cuff length at top	5 ⅜ in.		5 ⅝ in.		5 ¾ in.
7B.	Cuff length at bottom	5 in.		5 ¾ in.		5 ¾ in.

Table 4.1 Continued

8.	Cuff depth unfolded	1 3/8 in; 5 5/16 total	Cuff is sewn down to sleeve, can't unfold. Measured from inside lining to folded edge at wrist (first measurement), and from inside lining to outer edge of cuff (second measurement).	1 3/8 in	Cuff is sewn down to sleeve, can't unfold. Measured from inside lining to folded edge at wrist	1 15/16 in.
9.	Diameter of buttons	1 in.		1 in.	Buttonholes 2, 3, and 4 open	1 in.
10.	Length of braiding	3 5/16 in.	Measured from the fringe to the edge of button, taken on body but not on sleeve	3 1/4 to 2 1/2 in.	Measured from the fringe to the edge of button, taken on body but not on sleeve. Fringe set at an angle, giving 2 measurements	4 3/8 – 4 1/2 in.
11.	Width of braiding	11/16 in.	Taken on body, not on sleeve	3/4 in.	Taken on body, not on sleeve	7/8 in
12.	Length of fringe	2 9/16 in.	Overall length of fringe, individual threads were not measured	1 7/8 – 2 in.	Overall length of fringe	2 in.
	<i>Pockets</i>					
13A.	Width of pockets at top	8 5/8 in.		n/a	Pocket bag missing	n/a
13B.	Width of pockets at bottom	10 in.		n/a	Pocket bag missing	n/a
14.	Depth of pockets	11 in.		n/a	Pocket bag missing	n/a

Table 4.1 Continued

15A.	Width of pocket flap	9 in.	Measured at the top of the flap	9 ½ in.	Measured at the top of the flap	9 in
15B.	Location of pocket on body	21 in.	Measured from the edge of the hem to the top of the pocket flap	n/a		18 ½-3/8 from hem
16.	Depth of pocket flap	a) 3 7/8; b) 3 ¾; c) 3 ¾ in.	a) measured from the center point of the flap, b) measured from the left edge of the flap, c) measured from the right edge of the flap	a) 4 ¾ b) 4 ½ c) 4 ¾ in.	a) measured from the left point of the flap, b) measured from the center of the flap, c) measured from the right edge of the flap	a) 4 5/8 b) 4 1/2 c) 4 3/8 in. a-c measured from front point to back point
	<i>Coat Body</i>					
17.	Length of coat front	43 ¼ in; 45 ¼ in.	First measurement taken from high point of shoulder; second measurement taken from the shoulder seam located on the back	42 ¾ in.	From HPS to hem, no measurement from back seam	42 ½ in. measured from HPS to hem
18.	Length of center front opening	44 1/8 in.		44 ¾ in.		43 1/2

Table 4.1 Continued

19.	Across chest at armscye	8; 9 1/8 in. 16	First measurement taken where the front arm sleeve seam joins the width of the chest; second measurement taken at tendon level	7 7/8; 8 in. 14	First measurement taken where the front arm sleeve seam joins the width of the chest; second measurement taken at tendon level	8 1/4; 16 1/2 in. Measured as in other coats
20.	Across chest at underarm	12 3/4; 19 in. 25 1/2	First measurement taken from the center front to the side seam of the back, under the arm. Second measurement taken in the same way, but from center front to center back.	10 in. 20	from the center front to the side seam of the back, under the arm.	13 1/16 26 1/8
22.	Length of center back	42 1/8; 20 1/8 in.	First measurement is total length; second measurement is from center back neck to top of vent	39 1/2; 20 1/4 in.	First measurement is total length; second measurement is from center back neck to top of vent	22 1/2 (to vent); 40 1/2 total
23.	Across back at armscye	11 7/8 in.; 5 15/16	Measured from the level of the back sleeve seam joining the body	12; 6 in.	Measured from the level of the back sleeve seam joining the body to CB	10 1/2; 5 1/4 in.

Table 4.1 Continued

25.	Length of pleats	21 ½ in.		18 ¼ in	Right pleat measured from center of each button at top and bottom	18 in.
27.	Total sweep of hem	21; 31 ½ in.	First measurement is the entire front piece of the skirt; second measurement is the total sweep of the skirt (half)	27 ¼	Half of the hem	40 in., measured with the pleats open, half pattern. (25 in the front hem, 15 in the back hem).
28.	Skirt panels at widest point	21 in.	Measures the entire front piece of the skirt (same as above).	n/a		23 ¼ in (front piece of skirt)
29.	Widest point on body	16 in.	Taken at the widest possible point that the width of fabric could be	15.5 in.	Taken at the widest possible point that the width of fabric could be	About 15 in.
20.	Armseye to center back neck	7 5/8 in.	Taken over the shoulder from armseye to center back neck	n/a		7 1/4

4.2d| The Fashion Institute of Technology waistcoat The front of the matching weskit is made of the same knitted fabric as that of the coat, while the sleeves and back are made of the same fabric which lines the sleeves and back of the coat (a plain woven cotton,

linen, or blend). Only the front of the coat has been lined with the same dark brown twill as the coat; the rest of the weskit is unlined. Fourteen buttons and functional buttonholes run down the center-front of the weskit. All of the buttons are covered in the same knitted fabric. The two back panels of the weskit are not contoured with princess seams but rely instead upon a metal buckle for shaping. These straight seams begin midway between the armscye and underarm and end at a short side vent. There is also a center back vent. As with the coat, each sleeve is constructed with a front and back seam and the shoulder seams have been set in the back. Unlike the coat, there is no collar on the weskit. Finally, there is an unadorned, scalloped pocket flap on either side of the waistcoat. The measurements taken of the waistcoat are displayed in Table 4.2.

Table 4.2: FIT Waistcoat Measurements

#	ITEM	MEASUREMENT	COMMENTS
1.	Diameter of buttons	5/8 in.	Diameter; fabric covered; 14 total buttons spaced 1 3/4 to 1 1/2 in.
2.	Width of pocket flap	7 3/4 in.	
3.	Depth of pocket flap	a) 3 b)2 3/4 c) 3 in.	Measured at each of the three points of the flap, as in coat
4.	Length of coat front	29 1/4; 26 1/4 in.	First measurement is from shoulder seam to hem; second measurement is from HPS to hem
5.	Length of CF opening	21 3/4 in	
6.	Across chest at underarm	10 3/8 in.	
7.	Across chest at armscye	7 7/8 in.	
8.	Length of center back	25 7/8 in.	
9.	Buckle strap	4.5 x 1.5 in.	

4.3| RESULTS FROM THE VICTORIA & ALBERT WOVEN COATS

4.3a| The Lilac Coat (V&A number T.365:1) The following three coats were analyzed and documented in June, 2014 at the Clothworkers Centre in London to serve as a comparison or contemporary reference point for the three knitted coats described above. The first of these is a lilac, dusty-rose colored coat dated to 1770-1779 from Great Britain (all fibers, dates, and materials confirmed by V&A documentation). The woven wool has been felted to give a napped appearance, while the all but the sleeves of the inside of the coat have been lined in a vivid green silk. The sleeves are lined with a white fabric, probably of linen. The coat has a curved center-front that is cut away to the sides of the wearer, a short standing collar, narrow sleeves that end in a narrow cuff, and pockets on either side. The two pleats of the skirt have been set slightly to the back of the coat, rather than on the top of the shoulder, and there is a center back vent that overlaps to the wearer's right. The pleats appear to have been constructed by extending the side skirt panels so that the excess fabric could be folded into pleats. Two panels cut with princess seams have been used to construct the back of the coat so that it contours to wearer's body; these seams start mid-way between the underarm and the back seam of the sleeve and end above each pleat. The sleeves have been made with two seams, and the shoulder seams of the coat have been placed in the back. Figure 4.19 shows the construction of the back of the coat, while Figure 4.20 shows the green silk lining and inner pleat construction.



Figure 4.19. The back of the lilac coat, illustrating the locations of seams and pleats (color not true to life).



Figure 4.20. A view of the silk lining and inner pleat construction of the lilac coat.

The coat is decorated with frogging and tassels made of silver thread and red, green, and silver sequins, which extend out to one side from each mother-of-pearl button that runs down the center-front of the coat. These carved buttons have been further decorated with greens and yellow pastes. Coordinating buttonholes on the other side of the front of the coat also have the same frogging and tassels extending to one side. The buttons and buttonholes have been arranged in pairs of two down the center of the coat. Figure 4.21 illustrates these buttons, frogging, and tassels.



Figure 4.21. Detailed view of the buttons, frogging, and tassels that decorate the lilac coat.

These buttons, frogging, and tassels are found throughout the coat. Three buttons appear on each set of pleats – one at the bottom at the hem, one in the middle, and one at the top which has been further decorated with frogging and tassels. Three buttons with frogging and tassels are placed on each sleeve and oriented so that the tassel falls over the wearer’s wrist (two are on the front of the sleeve, one is on the back). Three sets of these also ornament each scalloped pocket, although the center button is placed just under the pocket flap rather than on top as with the other two buttons. The frogging over the center button ends in a faux buttonhole. Figure 4.22 shows part of the front of the coat, illustrating the cuff and pockets. Table 4.3 provides a list of measurements taken of this coat.

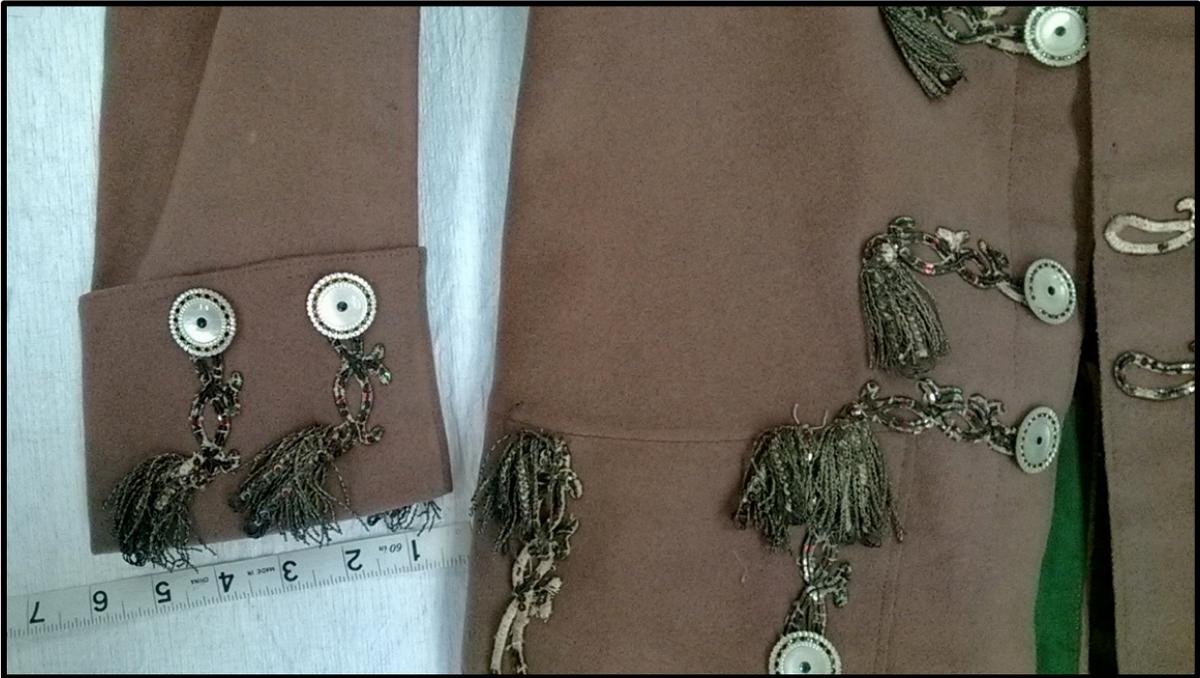


Figure 4.22. Locations of buttons, frogging, and tassels on the front of the V&A lilac coat.

Table 4.3: Lilac Coat Measurements (V&A number T.365:1)

ITEM	MEASUREMENT	COMMENTS
Collar length	17 ½ in.	Approximate
Collar depth	1 in.	Approximate
Cuff width at wrist	6 in.	
Cuff depth at top of arm	4 in.	
Arm length	25 in.	Approximate
Location of Pocket flap	18 in.	Measured up from hem to top of flap
Sweep of skirt (total)	51 in.	Approximate
Depth of flap	4 in.	Approximate

4.3b| The Pale Green Coat (V&A number T.71&A-1962) The second woven coat is also from Great Britain and made of creamy-green colored poplin (silk warp with woolen weft) and dated to 1775-1785 (all fibers, materials, and dates by the V&A). The Victoria and Albert Museum describes this coat as “fashionable formal dress for men in the late 1770s or early 1780s,” and since it is made of poplin, the coat may have been worn during summer. The coat is lined with slightly pink tinted cream-colored silk and backed with a glazed cotton (V&A collections online, accessed 2015). The construction of the coat is similar to that of the lilac coat described above – there is a short standing collar, cut-away curved center-front, scalloped pocket flaps on either side; two-seamed, narrow curved sleeves that end in a narrow cuff, and a center-back vent that does not overlap. The pleats have likewise been set in the back of the skirt and appear to have been constructed by extending the side skirt. The two back panels are constructed with princess seams that begin under the armhole and end at the top of each pleat, and the shoulder seams have been set in the back of the coat. Figure 4.23 illustrates the back construction of the coat.



Figure 4.23. The back construction and decoration of the V&A pale green coat.

Like the lilac coat, this coat has also been decorated with buttons, silk frogging, and silk tassels. The buttons are slightly conical in shape, do not lie flat, have been wrapped in silk thread, and placed in the center of the tassel. The frogging is made of a chain stitched silk thread. Six buttons with frogging and tassels run down either side of the center-front of the coat. The frogging starts in loops at the center-front edge and ends in a button and tassel – there are no buttonholes and the buttons are placed away from the edge of the coat.

Furthermore, the buttons are not evenly spaced – there is one row of button, frogging, and tassel, followed by a set of two, which is then followed by a set of three, for a total of six rows. Three buttons with frogging and tassels are placed on each cuff (two on the front, one on the back) and oriented so that the loop of the frogging is closest to the wrist. The scalloped pocket flaps are likewise ornamented, with the loop of the frogging placed at the point of each scallop. A button with tassels is placed just below each point of the scalloped flap. Figure 4.24 shows the buttons, tassels, and frogging on the front of the coat.



Figure 4.24. The front of the V&A pale green coat, showing the lining and placement of the buttons, tassels, and frogging.

Each set of pleats has also been adorned with three buttons and tassels – there is one at the top, center, and bottom of the pleats. Three sets of buttons with frogging and tassels

were also placed on either side of the center back vent and arranged so that the loops of the frogging are closest to the edge of the fabric. Figure 4.24, above, illustrates these details found on the back of the coat, while Table 4.4 lists the measurements taken.

Table 4.4: Pale Green Coat Measurements (V&A number T.71&A-1962)

ITEM	MEASUREMENT	COMMENTS
Depth of pocket flap	3 ½; 4 in.	Approximate; 3 ½ in at center point, 4 in. at the outer two points
Cuff depth	4 in.	
Collar depth	1 in.	Approximate
Width of frogging	1/2in.	Approximate
Length of frogging	3 ½ in.	Approximate, from loop of frogging to outer edge of tassel
Length of fringe	1 ¾ to 2 ¼ in.	Approximate, varies
Button diameter	¾ in.	Approximate

4.3c| Red Frock Coat (V&A number T.74-1962) The third coat viewed at the V&A is described as a fashionable red wool and linen frock coat from Great Britain, dated to 1780-1789. The outer material of the coat appears to be of a felted wool; the inside of the coat appears to be lined throughout with red silk although the inside of the sleeves cannot be viewed; and the interfacing of the coat appears to be linen, which can be seen through a tear in the silk lining (fibers and materials confirmed by the V&A). This coat is much like the previous two coats from the V&A – it has narrow curved sleeves and cuffs; a center-front that is curved and cut away to the sides; a set of pleats on either side that have been set in the back of the skirt; and a center-back vent that overlaps to the wearer’s right. The coat has also been constructed in a similar method – the shoulder seams have been set slightly to the back

of the coat, rather than on the top of the shoulder; the sleeves are made of two pieces; and the two back panels been attached to the front panels with princess seams. These seams begin just under the armseye and end above each set of pleats. Unlike the other coats, this one has a folded down collar that creates a slight point at the center back neck, and while there is a pocket on either side of the coat, the pocket flaps are rectangular rather than scalloped.

Ten buttons run down the center front edge of the coat. These buttons have been embroidered with a silver-gilt thread to form a basket pattern that covers a wooden base (V&A Collections online, retrieved March, 2015). This same thread creates an embroidered frogging and tassel to the side of each button and coordinating buttonhole. Two buttons with embroidered frogging and tassels are placed horizontally on the front outer edge of each cuff. Likewise, two rows of embroidered frogging and tassels are placed on each corner of the collar, although there are no buttons. Three rows of this same embroidery are found on each pocket flap, with a corresponding button for each faux buttonhole just under the flap. Lastly, the same buttons also decorate each set of pleats – there is a button at the top, middle, and bottom of each set, although no embroidered tassels or frogging ornament the buttons. Figure 4.25 shows a detailed image of the back of the coat, while Figure 4.26 shows the front of the coat. Table 4.5 lists the measurements taken of the coat.



Figure 4.25. The back of the V&A red frock coat.



Figure 4.26. The front of the V&A red frock coat, showing the folded down collar and red silk lining.

Table 4.5: Red Frock Coat Measurements (V&A number T.74-1962)

ITEM	MEASUREMENT	COMMENTS
Pocket flap location	20 in.	Approximate, measured from the top of the pocket flap to the hem
Diameter of buttons	½ in.	
Width of embroidered frogging	½ in. tapered to ¼ in.	
Length of embroidered frogging	1 in; 2 1/2in; 2 in.	First measurement is on the cuff; second is on the pocket flap; third is on the collar. All measured from edge of button to beginning of tassel
Length of embroidered tassel	1 ½ in.	
Depth of cuff	3 3/8 in.	
Depth of pocket flap	3 ¾ in.	Approximate
Location of pocket flap	18 in.	Approximate, measured from top of flap to hem

4.4 RESULTS FROM TWO VICTORIA & ALBERT KNITTED GARMENTS

4.4a| The black knitted breeches Two knitted items – a pair of breeches and a jacket – were viewed at the Victoria and Albert Museum’s Clothworkers Centre. The breeches will first be described, followed by the jacket.

From the United Kingdom, these breeches are made of a black machine-knitted silk and dated to 1790-1800. They are unlined except for the waistband and leg cuffs, which are lined with what appears to be linen. Buckram or a heavy weight linen interfaces the front closure tabs but not the fly. The knitted fabric has been engineered so that subtle stripes appear in the fabric – this has been achieved by first knitting several rows of front, or knit, stitches, followed by several rows of back, or purl, stitches. The fabric has been manipulated

so that the stripes are horizontal at the back of the center back of the breeches but on a diagonal at the side seams. The stripes have been oriented vertically on both the front and waistband of the breeches, although some patching has occurred in the back left side of the waistband so that the stripes do not exactly line up. Insets to the side of each top corner of the fly have been added; the fabric here is oriented on the diagonal to create contrast between the waistband and the body of the breeches. In addition, there is a wedge shaped insert in the back of the waistband. This insert is also made of knitted fabric, but does not have the engineered stripe of the main fabric. Furthermore, this insert has not been lined on the inside. There are two circular holes on either side of this wedge, where most likely there would have been garters, laces, or buckles to tighten the breeches. Figure 4.27 shows the front of the breeches, while Figure 4.28 displays the back of the breeches. Table 4.6 lists the measurements taken of the breeches.



Figure 4.27. The front of the V&A knitted breeches.



Figure 4.28. The back of the V&A knitted breeches.

Table 4.6: Black Knitted Breeches (V&A number T.745A-1913)

ITEM	MEASUREMENT	COMMENTS
Longest possible length of fabric	25 in.	Taken from the top of the leg cuff to the bottom of the waistband
Widest possible length of fabric	7 in.	Estimate; measured just above the waistband from the side seam to the center front
Gauge	30 courses by 24 wales per inch	Approximate

4.4b| The white knitted waistcoat The second knitted item viewed at the V&A is a white cotton waistcoat from Great Britain, dated to 1780. The front of the waistcoat is made from a machine-knitted jersey with an engineered decorative border – the decorative design has been constructed as the fabric was made and not embroidered or created later. This border runs along either side of the center front, around the front of the hem, and along the scalloped pocket flaps. Missed stitches within the jersey fabric create the tiny holes that form the border, which depicts wavy lines, circles, and hearts. The back of the waistcoat is made with a matching twill, which also lines the inside of the waistcoat. Dorset buttons (V&A) are used to close the waistcoat, but do not appear on the outside once buttoned. The side seams end in a vent on both sides, and the shoulder seams have been set in the back of the waistcoat. Figure 4.29 shows the front of the waistcoat; Table 4.7 lists the measurements taken of the garment.



Figure 4.29. The knitted front of the V&A knitted waistcoat.

Table 4.7. White knitted waistcoat (V&A number T.135-1976).

ITEM	MEASUREMENT	COMMENTS
Across Chest	10 ³ / ₄ in	Taken at armscye
Widest width of fabric	7 ¹ / ₂ in.	Approximate, taken from under the arm to center-front opening
Gauge	Roughly 30 courses by 30 wales per inch	Very rough measurement
Width of border	2 ¹ / ₂ in.	Taken at center-front

4.5| RESULTS FROM NEWSPAPERS

Newspapers from the second half of the eighteenth century were searched for records of knitted upper body garments and stocking frames from 1750-1800 in two online databases – the Burney Collection and America’s Historical Newspapers. The following searches were conducted on each database : *first*, for simply “knit*;” *second*, for “knit* coat,” OR “knit* shirt,” OR “knit* suit,” OR “knit* waistcoat,” OR “knit* frock,” OR “knit* jacket,” OR “knit* vest;” *third*, for “stocking frame” OR “knitting frame;” and *lastly*, for “knit* cloth*,” OR “knit* cloathcloth*,” OR “knit* fabric,” OR “knit* drapdrape*”.

For the first search, the Burney Collection gave 7,670 results and America’s Historical Newspapers gave 31,925 results. These results included mentions of knit breeches, knitting needles, and framework knitters within the first few documents; however, both databases provided too many search results to be analyzed.

In the second search, the Burney Collection revealed only one result. This record appears in the Morning Chronicle and London Advertiser on April 24, 1777. The author of this opinion article was “an advocate for the increase of the King’s revenue” and listed the wardrobe of a fashionable young man as evidence that a man’s clothing, even the king’s, was

critical to his status in society. Forty-five outfits (suits, or coats with matching waistcoats) were described in this article in addition to three shooting jackets, breeches, and a variety of “ruffles”. Among the articles of clothing described, the following knitted garments were included (excluding breeches):

1. A “silk knit frock suit”
2. A “black silk knit frock suit”
3. A “green silk shag knit frock lined with silk, and green and orange striped shag waistcoat, with green and gold binding”
4. A “green silk knit coat, bordered with green and gold, striped lace and silk lining, and green and gold striped waistcoat”
5. A “pea-green gogram frock, bound with narrow gold lace and silk lining, and buff silk knit waistcoat.”

America’s Historical Newspapers produced 63 results for the second search. Of the 63 results, 52 were relevant to this study, and of those that were relevant, 12 articles had multiple re-printings over a few days or weeks, culminating in 23 unique articles mentioning knitted goods. The search results revealed knitted goods described in both advertisements and runaway descriptions; therefore, the results are split into two charts according to the type of article in which they were found. A few dates shortly after 1800 still came up in the search despite the set time frame and were thus included, although mentions of knit hosiery and breeches were excluded.

Table 4.8: Advertisements from America's Historical Newspaper database

DATE	SOURCE; LOCATION	MERCHANT	# OF ADS	KNITTED GOODS
Dec. 6, 1784	The Independent Ledger and the American Advertiser; Boston MA	Nathan Frazier	1	Knit waistcoat patterns
Nov. 7, 1806	Newburyport Herald; Newburyport MA	Samuel Stevens & Co.	1	"ladies' nice knit ----- Coats"
Sept. 5 – Nov. 21, 1754	The Pennsylvania Gazette; Philadelphia PA	Hillborn and Jones	3	Knit patterns for waistcoats
Jan. 5 1761 – Jun. 14, 1762	Supplement to the Boston-Gazette; Boston MA The Boston Evening- Post; Boston MA The Boston News- Letter; Boston MA	Jonathan & John Amory	7	Knit waistcoat patterns "of most colours"
Jun. 7, 1756	Supplement to the Boston-Gazette, Boston MA	John Morley and Company	1	Knit waistcoat patterns
Sept. 11 – Nov. 27, 1783	The Salem Gazette; Salem MA	William Pruden	6	Knit waistcoat patterns
Jan. 28, 1784	Independent Journal; New York, NY	Public Auction	1	Worsted knit waistcoat patterns
Dec. 25, 1800	Boston Gazette; Boston MA	Wm. Lang & Co.	1	Knit frocks, socks pantaloons, and elastic drawers
Aug. 9 – Sept. 20, 1783	Independent Gazetteer; Philadelphia PA	P.D. Robert	3	Tamboured and silk knit vest patterns

Table 4.8 Continued

Nov. 15 & Dec. 6, 1785	Middlesex Gazette; Middletown CT	R.J. Meigs	2	Knit vest patterns “of various colours”
Oct. 22, 1764	New York Mercury; New York, NY	Andrew McMyer	1	Jersey knit vest
Jul. 29 – Sept. 9, 1771	The Pennsylvania Chronicle; Philadelphia PA	John Russel	3	Knit jacket patterns
Sept. 10-17, 1770	The Pennsylvania Chronicle; Philadelphia PA	Russel and Moor	1	Knit jacket patterns
Jan. 17 – Feb. 28, 1763	The Newport Mercury; Newport RI	John Channing	5	Knit jacket patterns
Oct. 3, 1780	The Pennsylvania Packet or the General Advertiser; Philadelphia PA	Samuel Lewis Wharton	1	Tambour’d and silk knit vests
Jan. 5, 1802	The New York Gazette and General Advertiser	Hone, Smith & Hone	1	“One case worsted knit vest, frocks, petticoats, &c.”

Table 4.9. Runaway notices from America's Historical Newspapers database

DATE	SOURCE; LOCATION	MISSING SUBJECT	# OF NOTICES	KNITTED GARMENTS
Aug. 14, 1761	Green & Russell's Boston Post-Boy & Advertiser; Boston MA	William Scott, soldier	1	Black knit jacket
Sept. 15 & 30, 1766	The New York Gazette; New York NY	Tom, slave	2	Cotton knit jacket
Sept. 25 – Oct. 9, 1766	The Massachusetts Gazette and Boston News Letter; Boston MA	Samuel Parkman Hersey, apprentice	3	Black knit jacket
Aug. 14 & Sept. 11, 1775	Dunlap's Pennsylvania Packet or the General Advertiser; Philadelphia PA	John Scott, servant	2	"a good scarlet knit jacket with callimanco back"
Oct. 27 - Nov. 3, 1775	The Essex Journal or New Hampshire Packet; Newburyport, MA The New Hampshire Gazette and Historical Chronicle; Portsmouth NH	Peter Long, slave	3	Knit jacket
Jan. 16, & 23, 1792	The Connecticut Courant; Hartford, CT	Elijah Cone, apprentice	2	Knit vest pattern
Jan. 18, 1794	Dunlap and Claypoole's American Daily Advertiser Extra; Philadelphia PA	John Campbell, indentured servant	1	"Knit vest coat sprigged"

In searching for "stocking frame", in America's Historical Newspapers database, 40 results were revealed but none of these were relevant to the study. These articles only described stocking frames for sale but gave no details, listed advertisements for journeymen

stocking frame knitters, mentioned riots in Nottingham, England, or detailed contact information for those who might have business with the subscriber. Searching for “knitting frame” gave no results in either this database or the Burney Collection.

The Burney Collection yielded 71 results when searched for “stocking frame;” 29 of these were relevant to the study. Of these 29 results, 15 were advertisements submitted by two different stocking frame knitters; 5 were notices of the auctioning of stocking frame knitter’s estates; 1 was news of a lawsuit over a new improvement to the stocking frame; 5 were calls for improvements to the stocking frame by the Society for the Encouragement of Arts, Manufactures, and Commerce; 2 were notices of new improvements to the stocking frame; and 1 was an advertisement of stocking frames for sale. Each of these articles will be analyzed in more detail in the next chapter.

Lastly, both the Burney Collection and America’s Historical Newspapers databases were searched for records of knitted cloth; the former yielded no results while the latter gave three results. Although the America’s Historical Newspapers database gave three results, they did not pertain to this study. In fact, these three articles were of advertisements for a merchant selling knit and woven hose – this is an example of how discrepancies in language can yield different results.

CHAPTER 5| DISCUSSION

5.1| ANALYSIS OF KNITTED COATS

In general, the garment construction of all three knitted coats is similar. All have the shoulder seams set slightly in the back and sharply angled; a curved, cut-away center front; two princess seam panels to form the back; a center back vent; sleeves made with two seams and a sewn-down cuff; and pleats in the back of the skirt made by triple-folding the fabric extensions of the side-front panels. A standing collar; narrow, curved sleeves; a slightly padded chest; and a fitted and tapered body that ends in a moderate skirt with narrow pleats at either side of the back are also present in all the coats. Each is lined in the skirt with a silk or silk blend twill and in the upper back and arms with linen. There is padding in the upper chest, most likely of cotton, and a stabilizing buckram interfacing in all of the coats. The lining and interfacing of the coats is extremely important to note because they hint at the function of these coats. Because of its looped structure, knitted fabrics have more stretch than woven fabrics and are typically used when garments require more elasticity while still maintaining their form. Since the coats are all lined in a woven fabric, it is obvious that the outer knitted fabric was not selected for its stretch as any flexibility gained from the knit would have been lost by the rigidity of the lining. The buckram interfacing would have further reduced any mobility of both the knitted fabric and the wearer, and reveals that a structured garment was desired. The extremely narrow sleeves made with two seams, princess seams, and existence of swing tacks in the pleats also confirm that these coats were not made with mobility in mind.

The ornamentation of the coats are, again, alike. Eight 1-inch buttons with basket embroidery run down the center front of all the coats, and braided frogging with tassels extends from each button and buttonhole. There are three rows of frogging with tassels on each scalloped pocket flap with three buttons just under the flap; a button at the top and bottom of each pleat with the top most button further ornamented by braiding and tassels; and frogging, tassels that fall over the wrist, and buttons are on each cuff. The fact that the tassels fall over the wrist and do not appear ragged or worn provides further evidence that these coats were not meant for great physical activity involving the arms or hands – if that were the case, the tassels could be expected to be much more frayed or even missing.

Given their general construction, it appears that the three coats served the same general purpose for each wearer and that these coats were constructed in a manner that was typical for the eighteenth century (Waugh, 1964). Further analysis, however, reveals slight differences in the details of the construction, silhouettes, and embellishments of each coat and alludes to the body type of the coat owners.

Beginning with the collar, two major difference can be seen between the three coats – first, the BH coat has a collar that is approximately two inches taller than that of the FIT coat (the DW coat has a collar height that is between the heights of the BH and FIT coats), and second, the DW coat has a collar length at the bottom that is nearly two inches longer than that of the BH coat (the FIT coat has a collar length that falls between the BH and DW collar lengths). The collar length at the top, however, reveals the opposite case – the DW coat has the shortest length while the BH coat has the longest length. These measurements give a more accurate depiction of the shapes of each collar. In comparison to one another, the DW

coat has a collar of medium height that is tapered from bottom to top; the FIT coat has a short collar that is moderately tapered; and the BH coat has a tall collar that is narrowly tapered. Further analysis of the BH coat also reveals that its collar was added or altered later in time as there are differences in wear, construction, and thread type between the collar and the rest of the coat (Mark Hutter, personal correspondence, March 7, 2015).

The sleeves of all three coats have sleeves with cuffs that are about the same length. The sleeve length including the cuff ranges from 26 $\frac{1}{4}$ inches to 26 $\frac{1}{2}$ inches; the cuff length at the top of the arm ranges from 5 $\frac{3}{8}$ inches to 5 $\frac{3}{4}$ inches; and the cuff depth at the top of the arm ranges from 3 $\frac{9}{16}$ inches to 4 $\frac{1}{2}$ inches. The only major difference between the sleeves of the three coats is the diameter of the arms. The BH coat has a bicep diameter that is two inches longer than the DW coat. The BH coat's diameter at the wrist is also larger than that of the DW coat, though not as drastically. Therefore, the wearer of the BH coat might have had the largest arms of the three coat owners while the wearer of the DW coat might have had the smallest arms.

All three coats are about 44 inches when measured from the center front neck around the curve of the coat to the hem. The BH, FIT and DW coats were 42 $\frac{1}{2}$., 42 $\frac{3}{4}$ and 43 $\frac{1}{4}$ inches, respectively, when measured in a straight line from the high point of shoulder to the hem. The front lengths of the DW and BH coats are about 45 inches when measured in a straight line from the back shoulder seam to the hem. Even though this measurement was not taken on the FIT coat, given the angle and proportions of the back shoulder seam and the similarity of the previous two measurements to the other coats, it is likely that the FIT coat was also about 45 inches for this measurement. Because of the similarity of these three

measurements, it is likely that the wearers of the three coats were around the same height – one does not appear to have been significantly taller or shorter than the others.

Although the owners of the coats were approximately the same height, in depth analysis of the back and skirts of the coats revealed subtle differences in their heights. The center back length of the coats varies slightly more than the length of the front, ranging from 42 1/8 (DW) to 39 1/2 inches (FIT). For the skirts of the coats, two different measurements were taken - the length of one set of pleats and the sweep of the skirt hem from center front to center back. The FIT and BH coats had similar pleat lengths of about 18 inches, while the DW coat's pleats were longer at 21 1/2 inches. These measurements correspond with the center back measurements – the DW coat has a longer center back length, so it makes sense that its pleats are also longer than those of the BH and FIT coats. The measurements of the pleats and center back length thus reveal that the skirts of the DW coat were longer than those of the other two coats, and thus its wearer was probably the tallest of the three, while the wearer of the FIT coat was probably the shortest. Lastly, the locations of the center back vents also reveals information about the build of the wearers – the coats measured 20 1/8 (DW), 20 1/4 (FIT), and 22 1/2 inches (BH) down from the center back neck. When the coats are viewed on a mannequin, it is obvious that the center back vent begins just where the torso ends (at hip level). Thus, when the locations of the vents are taken into consideration with the lengths of the center back, it appears that the DW coat owner had the shortest torso but longer legs while the wearer of the BH coat had the longest torso. Though the wearer of the FIT coat was probably the shortest, his torso length was approximately the same as that of

the DW coat owner. These conclusions, however, rely on the assumption that all three coats properly fit and were made specifically for the wearers.

Across chest measurements were also taken of the three coats for one side of the body. When these measurements are doubled for the whole body, the differences are more obvious. The FIT coat has across chest at front measurements at 14 and 20 inches (armscye and underarm levels, respectively), while the DW and BH coats have more similar measurements at 16/25.5 and 16.5/ 26 1/8 inches (respectively). Interestingly, the FIT coat has the largest across back measurement at the armscye level – it measures 12 inches and falls closer to the 11 7/8 measurement of the DW coat, while the BH coat has a smaller measurement of 10 1/2 inches. Some of the differences in these measurements can be attributed to the severity of the cut of the armscye, or how much the armhole cuts into the body. Overall, however, it appears that the FIT owner had the smallest chest but the broadest back, while the BH owner had the broadest chest but narrowest back.

There was much more variation in the sweep of the skirt hem; measurements varied from 27 1/4 (FIT) to 40 inches (BH), with the DW coat falling exactly in the middle of the range at 31 1/2 inches. These measurements reveal little about the build of the owners but do provide an idea of subtle idiosyncrasies of the silhouettes created by the coats. In a restricted comparison between the three coats while considering all of the previous measurements in addition to the measurements of the skirts, the DW coat owner would probably appear taller with longer legs, have elongated but moderate skirts and a broad chest and back; the FIT coat owner would likely appear the shortest with abbreviated and very narrow skirts and a slender chest but broad back; and the BH coat owner would seemingly appear of medium height with

a longer torso, very full skirts, a pigeon-like chest, and a slender back. Interestingly, the BH coat's pleats were constructed slightly differently than that of the other two coats – the back of the skirt is sewn down at the interior edge, holding the pleats instead. The FIT and DW coats have pleats that are tacked at the top, middle, and bottom, which is a more typical method of holding the pleats (Mark Hutter, personal correspondence, 2015).

Although all three coats appear to have identical braiding, tassels, and buttons, closer inspection reveals subtle differences. While the buttons on all the coats are made of 1-inch wooden molds covered in basket-like embroidery, the buttons on the FIT coat use two threads to create this pattern. In contrast, the DW and BH buttons only use one thread. (See Figure 5.1). Regardless, all of these basket, or “Leek,” buttons, were fashionable in the latter half of the eighteenth century (Mackenzie, 2004, page 14).

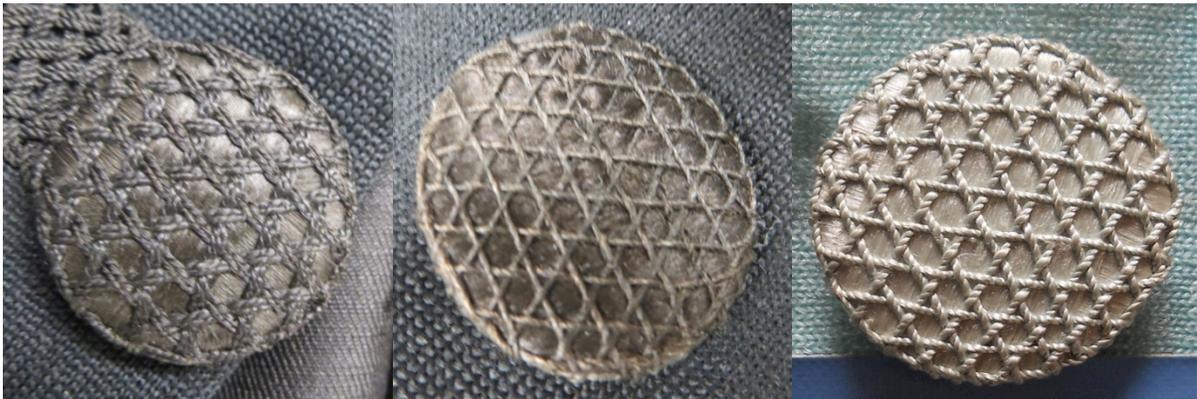


Figure 5.1. From left to right – FIT button with double thread embroidery, DW button, and BH button.

Likewise, the braided frogging on the coats appears to have the same cross-hatched pattern across all three coats, but small differences can be seen. The FIT coat uses two

threads that have been plied, the DW coat uses three threads that have been plied, and the BH coat uses two threads that have been wrapped. Furthermore, the size of the frogging is not consistent across the three coats. The width of the frogging is approximately the same (around $\frac{3}{4}$ to $\frac{11}{16}$ of an inch), but the length varies from 2 inches on the FIT coat to $4\frac{3}{4}$ inches on the BH coat (the DW coat has frogging length at $3\frac{5}{16}$ inches). The length of the frogging is in proportion with the size of the coats, however – the FIT coat has both the shortest froggings and smallest across chest measurements, while the BH coat has the longest froggings and largest across chest measurements. Interestingly, however, the DW coat has three rows of braided frogging on the sleeve cuffs even though it has the smallest wrist and cuff measurements, while the other coats only have two rows. Figure 5.2 shows the differences in the froggings. Most importantly, however, the locations of this braided decoration proves that the three coats are not livery – according to Waugh (1964, p. 56), “after 1750, except for Court dress, the fashion of edging all seams with braid was relegated to military and livery suits.”



Figure 5.2. From top to bottom- FIT frogging, DW frogging, and BH frogging (images not to scale).

The tassels at the end of the braided frogging also have slight variations. In all of the coats, the tassels consist of several thin, two-ply threads and a few thicker, thread-wrapped strands. The main difference in the tassels is that on the DW and BH coats the thicker strands end in a triangular stirrup, while on the FIT coat the ends of the strands have been left unwrapped. Figure 4.3 illustrates these differences. The DW coat also has three rows of

frogging and tasseling on the cuffs while the other two coats only have 2 rows. In addition, the number of stirrups differs for each coat – the DW coat has significantly more wrapped cords that end in stirrups than do the FIT or BH coats.



Figure 5.3. From left to right – FIT tassels, DW tassels, and BH tassels (images not to scale).

The three coats all have tri-scalloped pocket flaps of about 9 inches wide. In all of the coats, the outer two points on the flaps are equal lengths with the center point being slightly longer or shorter. Since the top of the flap dips slightly in the middle, it appears that the center point is longer than the other two, although measurements show that is not the case. In the FIT and BH coats the center point is slightly shorter, while in the DW coat the point is slightly longer. Overall, the BH coat has the deepest pocket flaps while the DW coat has the shallowest pocket flaps, but the difference is slight – no more than an inch. Unlike the froggings, the size of the pocket flap does not appear to be closely related to the size of the coat. For example, the DW coat has the smallest pocket flaps but neither the shortest length in center front or center back measurements, nor the narrowest across chest measurements.

Each coat also had individual anomalies. Most surprisingly, the FIT coat's pocket bags had been removed. This explains the missing button on the outer edge of each pocket flap – it probably had to be removed first before extracting the pocket bag. It is not clear why the pocket bags were removed, but it is possible the fabric was used to create the belt on the back of the weskit, or to reduce the bulk of the skirts. In contrast, the BH coat not only had its pocket bags still intact, but a wedge shaped piece of cut fabric and button remained within the pocket. Both fabric and button (believed to be original to the coat) were in nearly pristine condition due to their lack of exposure to light and handling. While the DW coat did have pocket bags, only a dyed wooden buttonmold was found within. This buttonmold had probably fallen off the coat at some point and was tucked inside the pocket for safekeeping, as the coat had a few missing buttons.

The FIT coat was also unique in that it did not have a diamond mark in the knitted fabric, which was found in the other two coats near the hem of the skirts in the back. Interestingly, the diamond marks, made by holding stitches to create small holes in the fabric, are identical in the two coats – nine small missed stitches create each diamond. These diamond marks served the purpose of indicating the ply of the yarn – the number of thread ends in a good would be “marked with the same number of oilet holes, in one direct line, in the same course,” as a result of the Tewkesbury Act of 1765-6 (Rapley, p. 25, 1975). Although there are nine “oilet holes”, or eyelets, it is unlikely that the fabric used a 9-ply yarn – the diamond marks are likely interpreted as three lines with three “oilet holes” each, indicating that either a 3-ply yarn was used, or perhaps as three separate 3-ply yarns knitting together. Since the FIT coat is slightly shorter in center back length and has the

shortest sweep of the hem, it may be possible that the maker of the FIT coat was able to cut the fabric to avoid the marks, although this is likely not the case since the Tewkesbury Act specifically states that the mark “shall be within four inches of the top or end of every such piece or pair of such goods or manufactures” (Rapley, p. 25, 1975). It is more likely that the FIT coat originally had the diamond marks and that over time, the coat may have been altered, thereby removing the marks. The measurements of the FIT coat previously described suggest that this might have been the case. Since the diamond marks are found at the hem of the skirts in the other two coats, an unaltered, longer FIT coat may have had the marks in the same location, but once hemmed, the marks would be gone.

The widest width of fabric used in the coats was measured to gain an idea of how wide stocking frames could knit during the era. The widest width used was determined by finding the largest width of fabric that had no piecing and measuring along the courses. This fell at the hem of the front of the coats and extended slightly into the side of the skirts until piecing began. Since the front of the coats are cut away, a straight line from the curve in the chest was drawn down to the hem to get an accurate measurement. All three coats had widest widths of 15 to 16 inches, indicating that the fabrics used for these coats were probably made on stocking frames of similar or wider widths.

Both the FIT and DW coats also have interesting fading patterns not seen on the BH coat. Though both coats are described by their museums as black, some of the panels of knitted fabric have a slightly darker and shinier appearance than other panels in the coats, which appear slightly lighter, browner and matte. This fading is not from exposure to light, as both dark and light panels appear on one side of the coat. In other words, the left side is not

uniformly darker or lighter than the right side. This is the case for both the FIT and DW coats. Neither is the color difference due to the pattern pieces being cut on different grains, which might diffract the light in distinct ways – when walking around the coats, the lighter brown areas and darker areas stay the same color rather than shifting with the light. A clue to this inconsistency in color was found in the FIT coat. There is a small, permanent crease in the knitted fabric just above the second buttonhole that extends horizontally across the wearer's left side. As suggested by Mark Hutter, this crease is most likely due to the finishing of the fabric, when it would be calendered, a process of using heat and pressure to create a shiny appearance on the fabric. It is possible that in this process various sections of the fabric were not heated at such high temperatures or for as long a period of time as other areas. While this difference may not have been apparent when these coats were worn, time and fading could have exaggerated this difference. The dark color of these coats may further highlight differences in calendering, which might explain why the BH coat does not have such color differences. Figure 5.4 shows the thin crease and color differences in the FIT coat.



Figure 5.4. A thin crease in the FIT coat, most likely from calendering. Differences in the color of the coat can be seen between the front panel and sleeve.

Finally, the FIT has one last singularity absent on the other two coats. As seen in Figure 5.4, two lines of thread have been placed between the froggings at the second and third buttonholes on the wearer's left side. These two threads appear to be original to the coat since they appear to be the same as the threading used in the swing-tacks of the pleats, and since the threads go through all of the layers and can be seen anchored in the inside of the coat. It is possible that these threads were used to hold medals, badges, or nosegays, or even secured the strap of a bag or weapon for ceremonial use.

5.2| COMPARISON OF KNITTED AND WOVEN COATS

All of the coats, whether constructed with knitted or woven fabric, were similarly constructed. Each had sharply angled shoulder seams that were set slightly in the back; narrow, curved sleeves made with two seams; narrow cuffs; pleats placed at the back; two back panels cut on the princess lines; and a center front that curves away to the sides. This type of construction appears to be typical of tailoring in the last quarter of the eighteenth century, as exemplified by these six coats and documented by Bradfield and Warwick *et. al.* Based on construction alone, the three knitted coats have been accurately dated to 1770-90 by their respective museums. Analysis of the collars suggests the knitted coats fall in the later years of this range – the pale green and lilac coats have short collars, only less than an inch in height, whereas the knitted coats have taller collars that were more typical of the last 15 years of the century (Warwick *et al*, 1965; Bradfield, 1959). Furthermore, since the red coat from the V&A has a folded-down collar, rectangular pocket flaps, and is described as a frock coat, it is obvious that the three knitted garments do not fall in the same category.

The aesthetic similarity of the embellishments of the V&A coats to those of the knitted coats reveals that the knitted coats followed the fashions of the day. Gone is the rich embroidery of earlier decades, found now only on the most formal of court dress, replaced now with braided frogging and tassels inspired by both military uniforms, and the braiding on Eastern European kaftans (McKenzie, 2004; Waugh, 1964). As a result of the French Revolution, overt display of wealth was frowned upon and more modest ornamentation of dress was becoming the norm – thus, dull colors such as the dusty lilac, pale green, navy, and light beryl blue of the woven and knitted coats were in style, in addition to other popular

colors such as crimson and gray (Bradfield, 1958). Furthermore, the locations of the froggings, buttons, and tassels of the knitted coats are in the same locations as those on the woven coats, with the exception of the center back vent ornamentation of the pale green coat. This fact, in addition to the similarity in the construction of all six coats, reveals that not only did the knitted coats follow the fashions of the day, they also served the same general purpose as a woven coat. The Victoria and Albert Museum describes the three woven coats as fashionable day wear for gentleman and even goes so far to state that the pale green coat was likely used for daily outings such as visiting with friends or shopping (V&A collections online, retrieved March 2015). Thus, it is reasonable that the three knitted coats served the same purpose.

Though the knitted coats were likely used for daily activities, the owners may not have been in the highest ranks of society. The backs of all three knitted coats are linen, while the backs of all three woven coats are silk. It may have been that the linen fabric provided more support to the elastic knitted fabric than would silk, but linen was also cheaper. This would mean that the back inside panel could be easily replaced when soiled or dirty – something that would happen when worn often. A gentleman high in society would have several coats from which to choose, subjecting his coats to less wear, and should they become worn, he could more easily replace a silk panel. The soiling across the back shoulders of the BH coat further suggests that the knitted coats were often worn. It is important to acknowledge, however, that the wear of the knitted coats could be due to their handling over the years. It may have been that the three knitted coats floated from collector to collector before finally arriving to their respective collections, and may have not received

gentle treatment up until that point. In contrast, the three woven coats may have come to the V&A much sooner and have thus been better preserved for a longer period of time. It is also a possibility that there is something about the knitted fabric that may simply have caused the coats to not hold up as well as a coat of woven fabric.

In addition, while the embellishments of all six coats are similar, the materials used are not. Both the red and lilac wool coats use silver thread; the buttons of the lilac coat are engraved mother of pearl decorated with pastes; and the pale green coat uses an outer material of poplin, a silk blend. The slightly higher quality of the materials used in the woven coats implies that their owners may have been financially better off than the owners of the knitted coats. Those who wore the knitted coats were most likely of average financial standing – though well worn, their coats are fashionable, decently well made, and used some silk in the materials, implying that they lived comfortable lives but not overly so.

5.3| KNITTED COATS AND OTHER KNITTED GARMENTS

Two other knitted garments were analyzed to provide additional insight to the use and structure of the knitted fabrics used in the three coats of this study. Both the breeches and waistcoat viewed at the V&A show that other knitted structures and patterns (besides a simple jersey) were possible to create using a stocking frame – shaped panels, shadowed stripes, and eyelet borders were also possible through different combinations of front, back, held, and missed stitches. In addition, the garments are proof that the stocking frame was capable of knitting at an even finer gauge than that of the fabric used in the knitted coats – so finely, in fact, that silk could be used. Furthermore, these garments reveal that the final

garment was considered in the creation of the knitted fabric. This is especially true for the waistcoat – the stocking frame knitter must have had a pattern to follow in order to create the shaped pieces and border. In contrast, the fabric used in the knitted coats was probably not specifically engineered for a garment – the coats are cut and sewn rather than shaped in the frame, and there is no variation in the knitted structure that would suggest a specific orientation or use for the fabric.

The construction of the waistcoat and breeches illustrates an interesting division in the use of knitted fabric -the waistcoat is fully lined while the breeches are only lined in the waistband for added structure. A knitted fabric was specifically chosen for its flexibility to allow the breeches to move with the motions of the wearer, and it is for this reason that most breeches during the second half of this century were made of knitted fabric. Since the waistcoat is lined, the reasons for choosing a knitted fabric did not include its elasticity. This leaves only three other possibilities for using a knit to make a garment – the fabric was either cheaper, a novelty item, or both. The choice of yarn, knit patterns, and embellishments could further allocate knitted goods to either luxury or commodity status, as illustrated with the woven coats and will be further exemplified with the analysis of newspaper articles. Like the waistcoat, it is probable that the knitted fabric of the coats was selected for one of the three reasons above.

While comparison of the materials used in the knitted and woven coats can suggest the financial status of the wearers, comparison of the knitted structures used can imply the fashionableness of the coat owners. Eyelet patterns were not used in the coat because as evidenced by the waistcoat, the eyelet border mimics embroidery – by the late eighteenth

century, embroidered coats were unfashionable and thus a knitted coat heavy with eyelet borders would not be popular. Vertical stripes, by contrast, were highly fashionable during this era and appeared on everything from stockings to frock coats, as illustrated by the fashion plate in Figure 5.5 (V&A collections online; Black, 2012; Bradfield, 1958). The silk knitted breeches also demonstrate this fashion, but most importantly they show that it was possible to create a striped knitted fabric.



Figure 5.5. A French fashion plate from the 1780s, depicting the popularity of stripes. Courtesy of the V&A collections online.

Thus, while a knitted coat with eyelet borders would be out of style by the late 1700s, a striped knitted coat would have been greatly in fashion. It is likely that it was impossible, however, to create a striped knitted fabric of the dimensions required for a coat. As mentioned by Sandy Black (2012), vertical stripes in stockings were created by knitting the stripes horizontally and then orienting the fabric so that the stripes were vertical when the

pattern pieces were cut. It would have been inefficient, if not impossible, to knit stripes vertically as every few stitches would have to be turned to create the pattern – it is much easier to knit several rows of front stitches followed by several rows of back stitches. Since knitted stripes were engineered horizontally, in order to create a vertically striped knitted coat, the stocking frame would have had to be as wide as the length of the coat. There is no record of a stocking frame this wide, as illustrated by an analysis of newspaper articles in the next section and by the widest widths measured on the three knitted coats, breeches, and two waistcoats. The DW coat had the widest measurement of 16 inches, and even if the coat patterns were cut on the fold, the widest the frame could be is 32 inches (according to newspapers of the era), which is still too narrow to create a vertically striped fabric long enough for length of a man’s coat. Therefore, a simple, jersey knit was used for the knitted coats of this study because vertical stripes were likely impossible without piecing and because the fashions of the day dictated the need for unembellished fabrics.

5.4| ANALYSIS OF NEWSPAPER ARTICLES

Although the first database search revealed too many results to be individually analyzed, it is obvious that both knitting and knitted goods, whether machine or handmade, were common in late eighteenth century England and America. Is it important to note, however, that these results may also have included “knit” as used in a different context, such as “she knitted her brows in concentration”. Furthermore, due to the poor quality of some of the newspapers, the database could have mistaken “knit” for another word, and vice versa. Therefore, little can be learned from these search results (due to the scanned newspapers in

the database, some of the letters are illegible, perhaps due to deterioration of the original document).

The second search proved to be much more informative. Although the Burney Collection only gave one result, it established without a doubt that knitted men's coats were at least known of, if not common, in England during the last quarter of the century. If this opinion article was in fact accurate and not an exaggeration to make a point, it would imply that it could be expected for an upper-class gentleman to have several different knitted coats, suits, or frocks from which to choose. What is more, such a gentleman could have a choice of the knit structure of his coat – jersey knitted, as are the three coats of this study, or “shag,” in which case the fabric would have a pile. This much, at least, is not an exaggeration, as a “shag” or velvet knitted coat from the turn of the eighteenth century does exist in the Snowhill Wade costume collection. Furthermore, there is also a machine-knitted silk coat from the same era in the LACMA collections. Whether the article has taken artistic license or not, it remains one of the most important results from the newspaper databases because it provides the only specific mention of knitted coats in either the Burney Collection or America's Historic Newspapers.

In the second search, America's Historic Newspapers revealed that there were at least 14 American merchants who sold knitted upper body goods from 1750 to 1800 (there may have been more who did not advertise in newspapers or whose records no longer remain). All of these merchants were located in New York, Pennsylvania, Rhode Island, or Maryland – all of which were major trade centers. Unfortunately, all but one of these merchants only sold patterns for knitted waistcoats (jackets and vests were alternate terms for waistcoats) with no

specific mention of knitted coats. It is possible, however, that tailors rather than merchants would have sold knitted coats (especially if they were bespoke) and perhaps had no need for advertisements if they had a steady clientele. Nevertheless, these results still provide two insights about the three knitted coats of the study. First, the fact that these merchant's goods were all imported, as stated in their advertisements, shows that America did not have as strong of a knitting industry as did the English. Thus, if one wanted to buy machine-knitted goods, he would either had to have lived in a major city, have the means to visit, or have the means to have the goods brought to him. This means that if the wearers of the DW and FIT coats were in fact American, they had to have been financially stable enough to have gained the coat by one of the three methods just described.

The waistcoat "patterns" provide a second insight. In the late eighteenth century, a "pattern" was not just a motif found on fabric but also pre-cut, shaped "pattern" pieces of fabric. These pattern pieces would be sold with the trimmings required to complete the garment and would not require much skill to be tailored to the wearer if need be, as it could easily be trimmed in on the sides. Given the great similarity of the three coats, the slight differences in their sizing, and the extra button and wedge of fabric found in the pocket of the BH coat, it would be feasible that coat patterns might also have existed. If the coats were sold as patterns, it would further support the hypothesis that the wearers fell within an average wealth bracket, as the most wealthy would most likely have their garments custom made. It does not, however, rule out the possibility that the owners of the coats fell within a lower class. This same search revealed run-away notices for seven different persons (soldiers, slaves, apprentices, and servants), all of lower class and all wearing machine-knitted

waistcoats. Consequently, it is apparent that all classes had access to machine-knitted goods. In addition, two later advertisements from 1800 and 1802 happened to appear in the search results. Both of these specifically indicated that knitted frocks were being sold, and in the case of the 1802 article, there were in fact cases of knitted frocks and waistcoats for sale. This further supports the idea that these coats could have been sold as patterns although these ads only mention frocks and not specifically coats.

Although the third search yielded 40 results from America's Historical Newspapers database, none of these results provided any useful information about the capabilities of American stocking frames, such as width or gauge. The fact that there were results specifically mentioning stocking frames for sale and advertisements for journeyman frame knitters is important – this shows that America did have some form of frame knitting industry, even if it was not as established as that of England. It is not impossible, therefore, that the knitted fabric of the coats could have originated in America, though the third search results from the Burney Collection reveal that it is more likely the fabric came from England.

The Burney Collection produced valuable information from the third search, including information on the width and gauge of stocking frames. A notice of an auction described “one 24 Gage altered Stocking-Frame, and one 30 Gage fine ditto” (Daily Advertiser, 1-12-1796; posted 4 times) while another advertisement described a “24 Worsted-Stocking-Frame,” a “26 Silk ditto, 18 Inches wide; and a 25 Silk ditto, 19 inches wide” (Owen's Weekly Chronicle or Universal Journal, 1758). These measurements correspond to the width and gauge of the three coats' knitted fabric. Though the widest width of the coat fabric measured was only 16 inches rather than the 18 or 19 described in the

advertisement, the widest width of the coat does not take into consideration the selvedge of the fabric or leftover fabric after cutting the pattern. Likewise, the advertisement only makes claims about the width of the stocking frame and not about the width of the final fabric – once the fabric is taken off the frame and has undergone any finishing the stitches will relax, making the width of the fabric slightly less than the width of the frame. Therefore, it is likely that the knitted fabric of the coats was knitted on a frame around 18 or 19 inches, as described, and that the widest width of fabric including the selvage may have been slightly greater than 16 inches. This confirms that it would have been impossible to create any vertical patterning that would be of correct dimensions for a man's coat as mentioned above. In addition, the size of the stocking frame would have greatly limited who could wear knitted garments - the wearer's widest width across either half the back or the front could not be greater than the width of the frame without having to use unsightly seaming. Furthermore, these articles are in accordance with the gauge of the coat's knitted fabric – the gauge of the fabric for all the coats ranges from 32-34 courses by 24-28 wales per inch. The gauge of the stocking frames advertised would have gone by the wales per inch as this would measure the number of needles per inch on the frame, and thus the fabric of the knitted coats could easily have been created on a “24 Worsted-Stocking-Frame.”

In the third search, the Burney Collection also provided information about innovations to the stocking frame from 1750 to 1800. From June 1764 to June 1765, the Society for the Encouragement of Arts, Manufactures, and Commerce posted 5 advertisements offering monetary rewards for improvements to the stocking frame with special attention to “simplicity in the construction” (Public Advertiser, Gazetteer and New

Daily Advertiser, and St. James's Chronicle or the British Evening Post, 1764-1765). In 1774 there was even a lawsuit over a patent infringement concerning the stocking frame, in which "the insidious enemies of the defendant Davies are defeated in their attempts to do him a long premeditated injury..." (Middlesex Journal and Evening Advertiser, 1774). Lastly, in the spring of 1776, William Horton had been awarded a patent for his "new Piece of Machinery to be fixed to a Stocking Frame," which allowed the frame to create "knotted and double looped Works in Gold, Silver, Silk, Thread, [and] Worsted" (St. James's Chronicle or the British Evening Post, 1776; Public Advertiser, 1776). All of these articles prove that not only was there great innovation occurring in the stocking frame during the late eighteenth century, but that there was also fierce competition to both innovate and establish a frame knitting business. Felkin and Henson further attest to the innovation occurring during this time, proving the importance of the stocking frame industry to the British economy (Felkin, 1967; Henson, 1970). Given the competition and new breakthroughs surrounding the stocking frame, it could be possible that the knitted coats were seen as a novelty item or perhaps were sold as promotional items or samples to advance a newly established frame-knitting business.

The 1774 lawsuit concerning Thomas Davies was not the first time he appeared in the newspapers. This same search also yielded 6 advertisements by Davies from June 1767 to July 1768. In one of his earlier advertisements, Davies described his ability to make "Velvet, Shag, and Brocaded Silk Pieces for Coats, Waistcoats, &c., plain, cut, figured, and in Gold and Silver, upon a Stocking Frame." He also sold his goods through a middleman to other areas of England and to the American colonies. Davies was apparently met with great success as a year later he was thanking the "Nobility and Gentry for the great Encouragement

and Preferences given,” and had added ladies’ riding habits and “figured Waistcoats with brocaded Borders” to his list of goods – perhaps this success is what motivated the plaintiffs to sue Davies a few years later in 1774 (Public Advertiser, 1768; St. James’s Chronicle or the British Evening Post, 1767.) Davies’ alleged success has several implications for the three knitted coats of this study. Firstly, his advertisements are another specific mention of machine-knitted coats, and this, combined with his success, suggests that such knitted coats and waistcoats were popular in London, even with the upper classes. Secondly, his 1767 advertisement is proof that knitted coat pieces were being imported to America. This means that the three knitted coats could have been made as pieces in England and then imported to America; this further supports the hypothesis that the coats were sold as “patterns,” especially since Davies was not selling complete waistcoats or coats, but only pieces. Lastly, Davies advertisements reveal that machine-knitted coats and waistcoats could be made with a wide variety of materials and were capable of being quite lavish. Since more extravagant knitted coats did exist, it implies that the plain worsted knit coats of this study did not serve the purpose of impressive novelty or fine formal wear, providing more support to the idea that these coats were worn often as day-wear by men of average wealth.

The Burney Collection does not reveal any more advertisements by Davies after 1768, but beginning in 1790, a new hosier, Richard Carter, began advertising. Carter advertised 7 different times from 1790 to 1799, and by his last advertisement he had become the “Hosier and Draper to their Royal Highnesses” (Morning Chronicle, 1799). The following list on page 120 describes his wide assortment of goods:

1. “stout six-thread and eight-thread Worsted Pieces, both plain and ribbed, for Riding Breeches and Pantaloon”
2. “also finer sorts, of the most fashionable Patterns of Cotton and Worsted, for evening” (most likely referring to finer breeches as opposed to the formerly listed stout breeches)
3. “superfine silk pieces and pantaloons for Dress”
4. “Pantaloons of every colour”
5. “fine thin Cotton for the East and West Indies”
6. “Under Waistcoats and Drawers...of Cotton and Lamb’s Wool [and] Under Pantaloons”
7. “Elastic coloured and black gaiters”
8. “every other article of Hosiery, Beaver Travelling Caps, and a new Manufacture in Worsted, for Morning Waistcoats...[and] real Angola Rabbits Down Gloves.”

Carter specifically states at the beginning of his advertisement that “pantaloons, drawers, and Under Waist-coats [were] wove complete to shape on the Stocking Frame” and although he does not clearly describe the rest of his goods as frame-knitted, he implies that this is the case and does not state otherwise. Throughout his article he compared his pieces to other woven fabrics, pointing out the greater benefits of his garments such as durability, so it plausible that his goods would be machine-knitted. As with Davies, Carter’s success is also of significance to the three knitted coats. He proves that a variety of items could be made with knitted fabric, providing evidence that his goods were also sold through middlemen to “Merchants and Dealers”. He also shows that even the most elite of society – including the Prince of Wales – wore his products, and he explores the benefits of knitted goods (more durable, dye-fast, lighter, non-shrinking, and better fitting than cloth). Furthermore, Carter may be one of the first examples of knitwear being used for undergarments and athletic wear, as at one point he also sold “elastic...Pantaloons, and Waistcoats for Cricket or Tennis Dresses” (Sun, 1794). Despite Carter’s long list of products, he interestingly does not list coats and appears to focus more on breeches and undergarments.

The last search was conducted with expectations that the terms would recall both advertisements for knitted coats sold by persons other than merchants, such as tailors or drapers, and advertisements for the sale of yards of knitted fabric (piece goods), rather than knitted items. Neither database produced any results, so it is unlikely that knitted fabric was sold by the yard and not already made into a product. This would further support the possibility that the coats were sold as patterns. Though this search provided no results, it did provide three false results that were unrelated to the study – this serves as a good reminder that database searches are not always accurate.

CHAPTER 6| CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

6.1| THE KNITTED COATS

A detailed analysis of the three knitted coats showed that three different men of similar size but with slightly different body types wore the coats. The minor differences in the buttons, froggings, and tassels could have been due to different suppliers of the coat trimmings, especially if the coats were not made at exactly the same time. The general construction of the coats (seam, pleat, and trimming locations) does not reveal if the same person made all three coats, although the BH coat's center back vent overlaps to the left rather than the right. This suggests that the BH coat was certainly made by a different person than the DW and FIT coats, though it is impossible to know if the same person made these two coats. The fact that the pleats of the BH coat are not held together with three tacks, as in the other two coats, further supports this claim. It is, however, possible that the same manufacturer made the knitted fabric for all of the coats given that the fabric has the same gauge and approximate widest width of fabric. If the same manufacturer did not make the knitted fabric, it may have been that the width and gauge of these coats were standard for stocking frames in the late 18th century. The identical diamond marks on the DW and BH coats cannot provide evidence as to the fabric manufacturer of the coats, but they do imply that the same type of yarn was used since the marks establish the ply of yarn – in this case, either a 3- or 9- plied worsted yarn or three ends of a 3-ply yarn were used in both coats according to the Tewkesbury Act. While the FIT coat did not have the marks, it may have undergone alteration, thus removing the original diamond marks.

The uneven fading of the black FIT and DW coats is most likely due to uneven heating or pressure when the fabric underwent calendering, as hinted at by a thin permanent crease on the FIT coat. The thick threads between the second and third froggings of the FIT coat appear to be original to the coat, and may have held badges, medals, or the strap of a weapon or bag in place. It is impossible to know exactly what these threads were for, however, since they do not seem to have been documented previously. If the threads were associated with the military, however, the wearer was probably not highly placed as he would otherwise have worn a uniform defining his status, especially if he was in the British military. Furthermore, the materials used in the coats in addition to their wear indicate that men of average wealth probably wore these garments often. Comparison to woven coats further implies that these coats were fashionable for the late 18th century and were likely worn for informal daily activities such as attending business meetings or visiting with friends.

Finally, the coats are all lined with a woven fabric and interfaced with buckram. This defeats the purpose of any elasticity gained by the knitted fabric, so it is clear that the flexibility of knitted fabric was not considered when making the coat. Range of movement was also not a priority as the sleeves are very slender and made with two seams, the pleats are narrow and held with buttons, and the coat is cut close to the body. Therefore, these coats were not meant for physical exertion, further supporting the conclusion that these coats were suited as informal daywear.

These results are constrained by the fact that the BH coat was not seen by the author. Therefore, the BH analysis relied on pictures taken by the research team and measurements

taken from a paper pattern drafted by Stephanie Kemp. In fact, the results would be more accurate if measurements for all of the coats had been taken from a pattern as there would be less room for error, assuming the pattern is accurately drafted. In addition, the FIT and DW coats were only seen once under time constraints, and so measurements were not double-checked for accuracy; as always, there is room for human error.

6.2| COMPARISON OF KNITTED AND WOVEN COATS

A comparison of the knitted coats to the woven coats showed that the knitted coats were constructed in a manner typical of the late 18th century and were fashionable for the times. Because of this similarity in style and construction, the knitted coats likely served the same purpose as the woven coats, which according to the V&A, were worn by gentleman for daily outings. The difference in the materials used, particularly in the upper back lining, in addition to the wear of the knitted coats, suggests that men of the highest class did not wear the coats as was the case for the woven coats. The lowest class did not, however, likely wear them since the coats were decently constructed and did use some fine materials (specifically, silk in the buttons, frogging, and tassels). It is most likely that the wearers of these coats were men of average wealth who wore them often on daily outings. The differences in the conditions of the woven and knitted coats is also interesting – while it is likely that the knitted coats were worn more often, it is important to note the possibilities that the knitted coats were not as well preserved over the years or that the knitted fabric was more susceptible to fading and staining. These conclusions are limited by the V&A's constraints and time limits and restrictions on measuring and handling the woven garments; the small

sampling of coats analyzed for comparison to the knitted coats; and speculation on the purpose of the woven coats as it is impossible to know what truly happened in the past.

6.3| KNITTED COATS AND OTHER KNITTED GARMENTS

The machine-knitted breeches and waistcoat proved that the stocking frame was capable of creating different knit structures other than a simple jersey. When these garments are compared to what was fashionable during the late eighteenth century, they help illuminate the reasoning behind using a simple jersey knit to create the coats. The eyelet border of the waistcoat would have been out of style as it mimicked the now unfashionable embroidery of coats (embroidery was fashionable for waistcoats, but was only fashionable on coats intended for court wear). Even though the stripes of the breeches were very popular, both the newspaper results and the widest width of fabric used in the coats reveals that it would have been impossible to create a vertically striped knitted coat due to the narrowness of the stocking frame. The similarity of the gauge of all three knitted garments implies that the knitted fabric of the three coats was a typical gauge for the late 18th century. These results are again limited by the fact that pictures were used to analyze the garments and that direct measurements could not be taken of the V&A garments.

6.4| NEWSPAPERS

A search of two newspaper databases discovered that knitted coats were at the very least known in both America and England. The major cities of America's mid-Atlantic region did have merchants who sold imported knitted goods, including both knitted coats and

knitted waistcoat “patterns”. These waistcoat patterns, in combination with the findings in the BH pocket and the advertisement of the hosier Davies highly suggests that the three knitted coats of this study could have been sold as patterns as well, even though there is no specific mention of coat patterns. The newspapers also show that all classes wore knitted upper body garments, from runaway apprentices to the gentry and nobility – this result, however, is limited by the fact that the runaway ads only described knitted waistcoats, and not knitted coats. In addition, knitted coats could be made with a variety of materials, including velvet, silk, wool, gold, and silver. Furthermore, other advertisements describing breeches and frames for sale show that the stocking frame could knit with 6 and 8 plied thread, and could produce fabric at 24, 25, 26, and 30 gauge on a frame between 18 and 19 inches wide. These advertisements are confirmed by the measurements of the knitted coats, as their gauge and width falls within these constraints. Finally, the newspapers show that England had a competitive frame knitting and hosiery industry and that America even had a modest frame knitting industry. Most importantly, the newspapers reveal that both the British and American public were aware of upper body garments made of machine-knitted fabric – thus, the three knitted coats of this study were probably not completely out of the norm or uncommon.

The newspaper results are greatly limited by the accuracy of the database search, as exemplified in the fourth search for knitted fabric. In addition, only two databases were searched, and there may have been many more newspapers with mentions of knitted coats that either were not in the database or that have not survived. Furthermore, the first result of

only “knit*” revealed too many results to analyze; there may have been more examples of knitted coats in the first search.

6.5| FUTURE RESEARCH

This research has illuminated the likely purpose of the coats, described the build and hinted at the financial status of their wearers, confirmed the knitting widths and gauges of stocking frames at the end of the eighteenth century, and uncovered other mentions of knitted coats of various materials, suggesting that they might not have been as uncommon as previously thought. Future research would provide possible discoveries and documentation of any other eighteenth and early nineteenth century machine-knitted coats – more coats may exist in smaller collections or in other countries besides America and England. Constructing the patterns for both the FIT and DW coats would also provide additional insights to this study by confirming the accuracy of the measurements taken on the garments. Having patterns for the coats would also serve to add documentation of the coats, should anything ever happen to them. Exploring the yarn construction and dyeing and finishing methods are of additional interest as it would be advantageous to eventually replicate the knitted fabric. This exploration would reveal more about the apparel supply chain in the late 18th century. In addition, this replicated fabric could be used with the coat patterns to reconstruct each coat – these replicas could be handled more while still conserving the original garment. By physically reconstructing the coats researchers would also have a better understanding of the techniques used in creating the originals. There is also room for exploration of trade and export laws regarding fabrics, which might provide more information on the distinguishing

diamond marks on the DW and BH coats and elaborate on the coat's journeys to their current locations. This would also add to the knowledge of 18th century apparel supply chains. Lastly, finding and tracing the paper documentation of the three coats would perhaps provide more solid information on the original owners of the coats, which would either support or counter the conclusions drawn in this study.

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