

Underwear in the Maciejowski Bible



Folio 12v: Gideon is called to rescue Israel from Midian.

Constanza de Mendoza (Sunny Buchler)

sunny_buchler@sbcglobal.net

<http://sbuchler.livejournal.com>

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This article is about the men’s and women’s underwear, as seen in the Maciejowski Bible. The Maciejowski Bible was commissioned by King Louis IX (Saint Louis) of France, and was illustrated in Paris, somewhere between 1244 and 1254. Multiple artists worked on the manuscript, but their identities are unknown¹. The clothes depicted in this manuscript may or may not be similar to those depicted in other 13th century manuscripts. The intent of this paper is not to write a treatise on 13th century underwear, but to analyze the underwear seen in this particular source, with an eye to recreating them.

¹ Medieval Tymes, “Maciejowski Bible.”
http://www.medievaltymes.com/courtyard/maciejowski_bible.htm. Retrieved Aug. 14, 2009.

Braies in the Maciejowski Bible

Images of Men's Braies



Figure 1.1 Folio 12v
Gideon is called to rescue Israel from Madian.



Figure 1.2 Folio 18r
Ruth compromises Boaz



Figure 1.3 Folio 25r
Agag is brought to Samuel



Figure 1.4 Folio 35v
The Gileadites burn the bodies of Saul and his sons



Figure 1.5 Folio 35v
The Gileadites burn the bodies of Saul and his sons



Figure 1.6 Folio 33r
David shears off a piece of Saul's Mantle in the cave at Engedi



Figure 1.7 Folio 35v
The Philistines hang Saul's body from the walls of Beth-shan

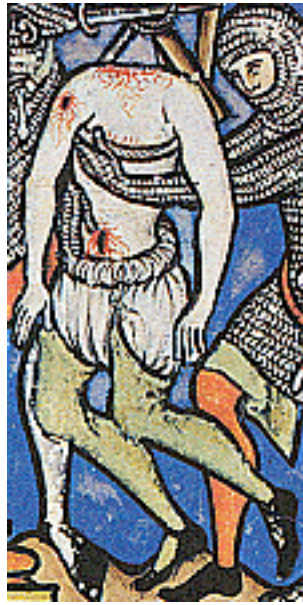


Figure 1.8 Folio 35v
Warriors of Jabesh-Gilead remove Saul's body from the walls of Beth-shan



Figure 1.9 Folio 38v
The assassins of Ishbosheth are slain

Fabric

All of the braies are white. The braies are very full though the butt, but they are soft enough to tuck smoothly inside the hose (figure 7 and 8).

Legs

The legs appear to be straight and loose, hanging to about the mid-calf.

Hem



Figure 1.10: 1328 Paris. *Petite Hours of Jeanne d'Evreaux*.

Every pair of braies shown loose has the hem pulled up by a cord descending from the waist. This makes it hard to say if the hem is straight or at an angle.

Figure 3 suggests that there is a slit in the bottom of the hem (rather than just the bottom edge being pulled up) because the left side hangs straight. However, if there is a slit in the leg openings it's hard to figure out; in figures 1-3, 5 and 9 the slits seem to be both on the same side of the legs (either right or left) rather than being both on the outside or both on the inside, which would be more natural (assuming the braies pattern is symmetrical). On the other hand, if there isn't a slit why would the cords that fall from the outside of the hips reach towards the inner leg to pull up the hem; figure 1-3, 5 and 9 all show one leg doing this, while the other is pulled up from the outside of the leg.

Figure 10, which dates to nearly 100 years after the Maciejowski Bible (but was made in the same city) makes me lean towards the slit hypothesis, as it is clearly showing braies with a slit.

Waist

Figures 1, 2, and 5-9 all show a roll of fabric at the waist. The man on the right in Figure 1 shows a loose apron of fabric hanging down from his waist. I hypothesize that this is showing the roll of fabric un-rolled; that this is the upper section of the braies. I'm going to call this the coulisse².

Figures 1 and 2 clearly show a cord coming out of the side of the roll of fabric, which probably means that there is a slit in the coulisse at the sides. Figure 4 is difficult to decipher, but the line of fabric descending from the waist (see Figure 11) could be the side of the coulisse.

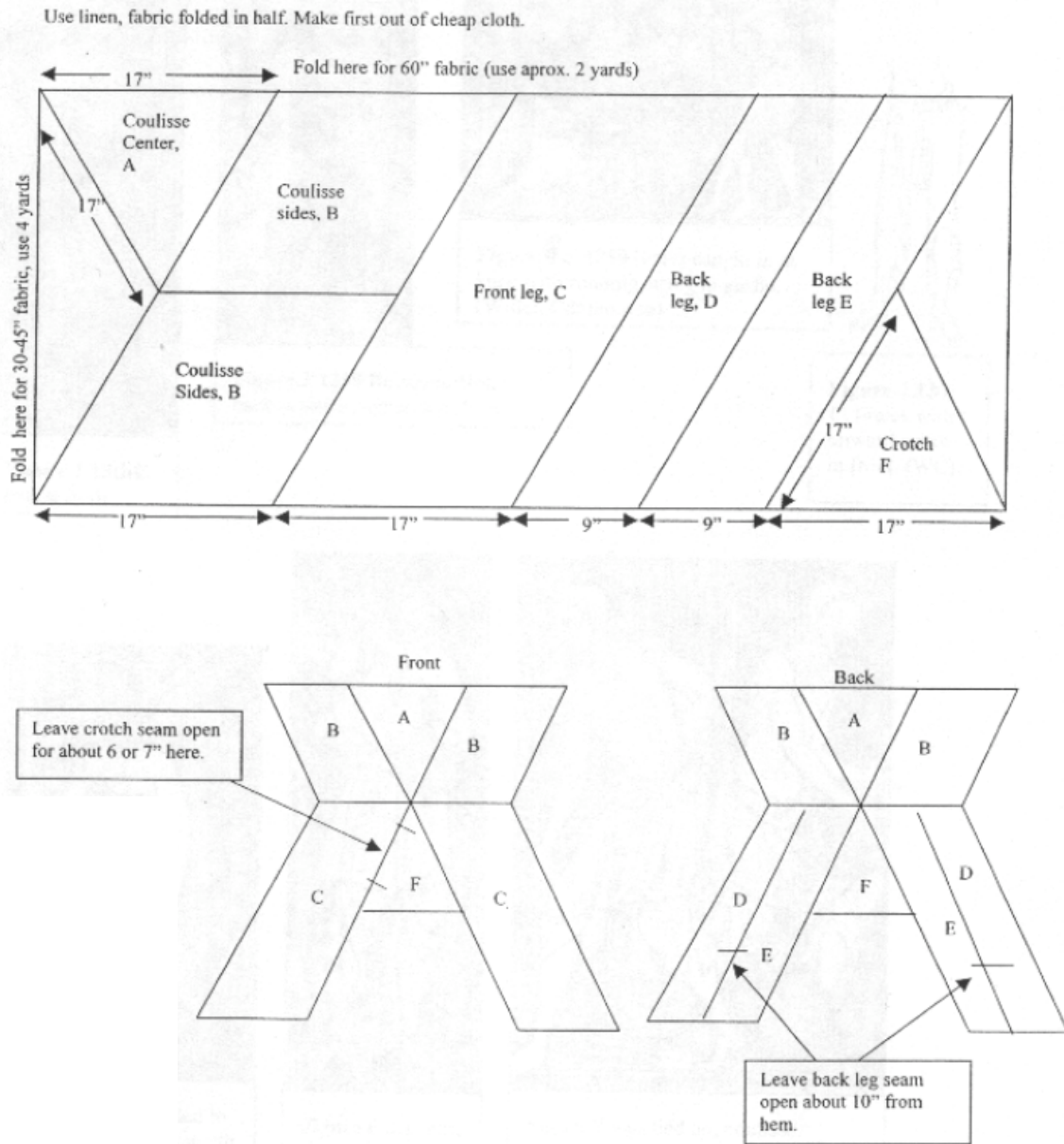


Figure 1.11 Folio 35v
The Gileadites burn the bodies of
Saul and his sons

² French term for a deep tubular hem used by Willet and Cunington. *The History of Underclothes*, p27.

Construction of Men's Braies

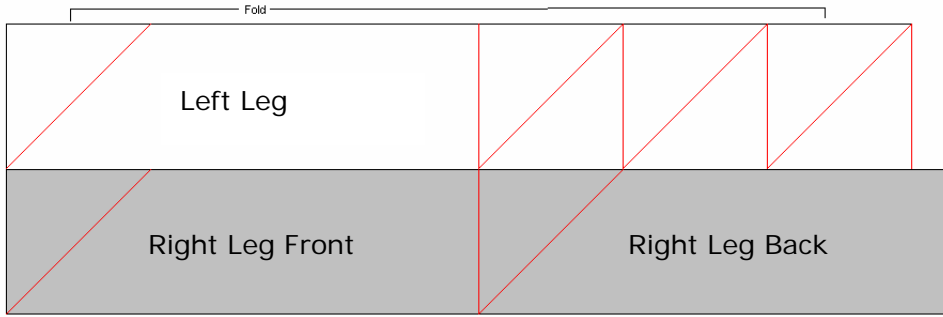
There are 6 potential patterns here, all of which have issues.



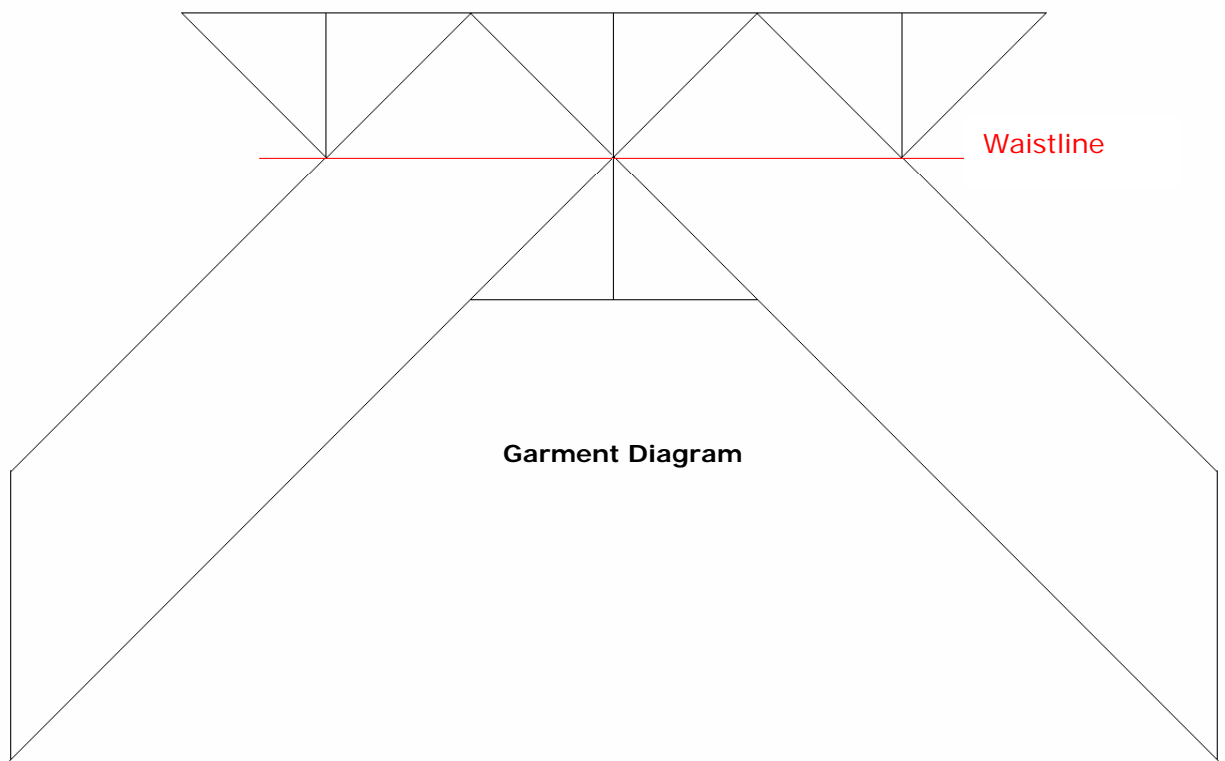
Pattern 1.1

<http://camelot-treasures.com/aenor/BraiesPattern.pdf>

This is Mistress Aenor d'Anjou's pattern, which she attributes to *Clothing of the Norman Knight* by Thomas Ball.



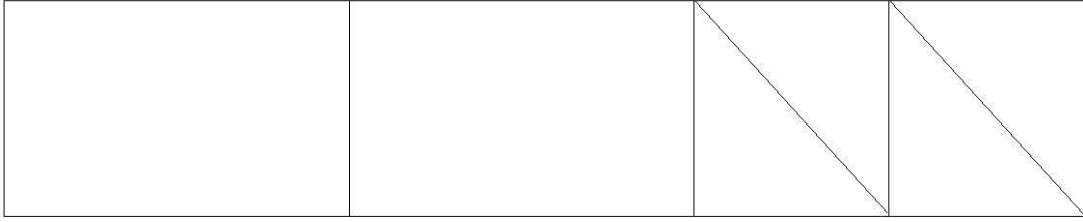
Fabric Layout



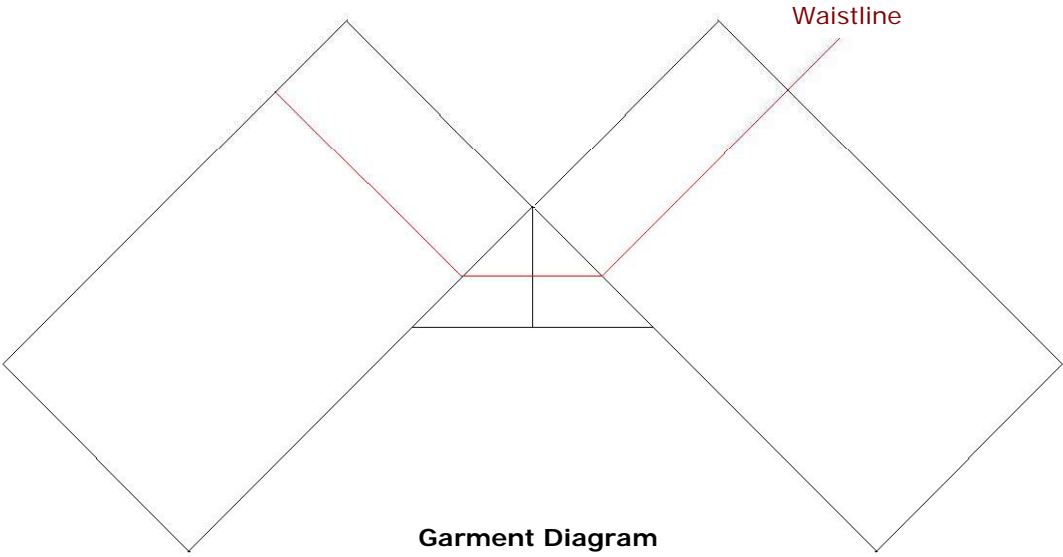
Garment Diagram

Pattern 1.2

This pattern comes from trying to figure out why the slits might be both on the right (or both on the left). If one of the legs is cut on the fold, there is only a inseam seam, but if the other is cut in 2 separate pieces there is both an inseam and an out-seam. Hence it could make sense for one leg to be slit on the inseam and the other on the out-seam, which results in the slits both be on the right (or left) sides of the legs.



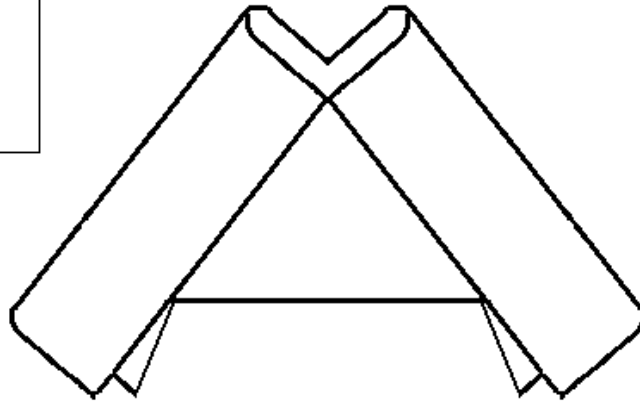
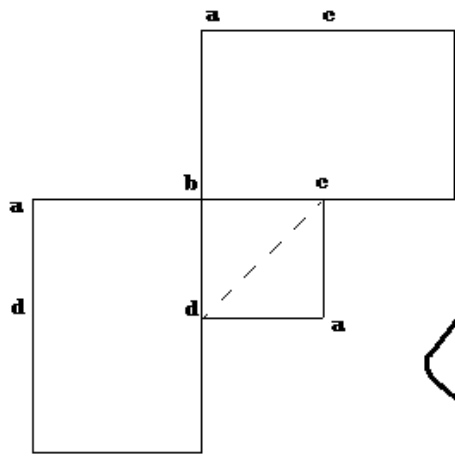
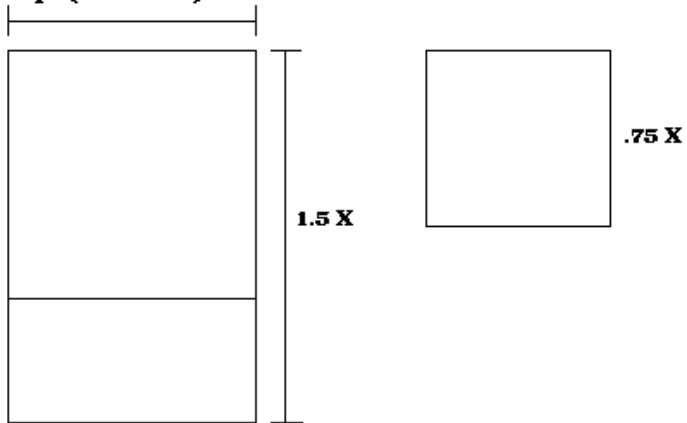
Fabric Layout



Garment Diagram

Pattern 1.3

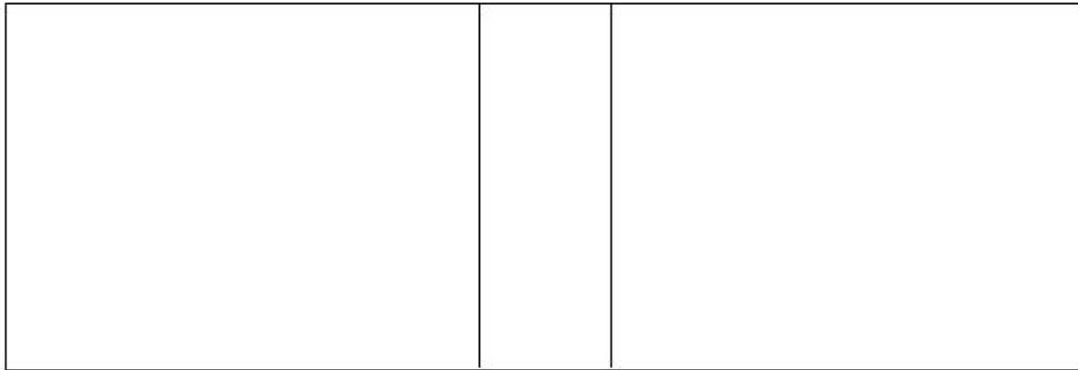
**1/2 circumference of the
hips (minimum) = X**



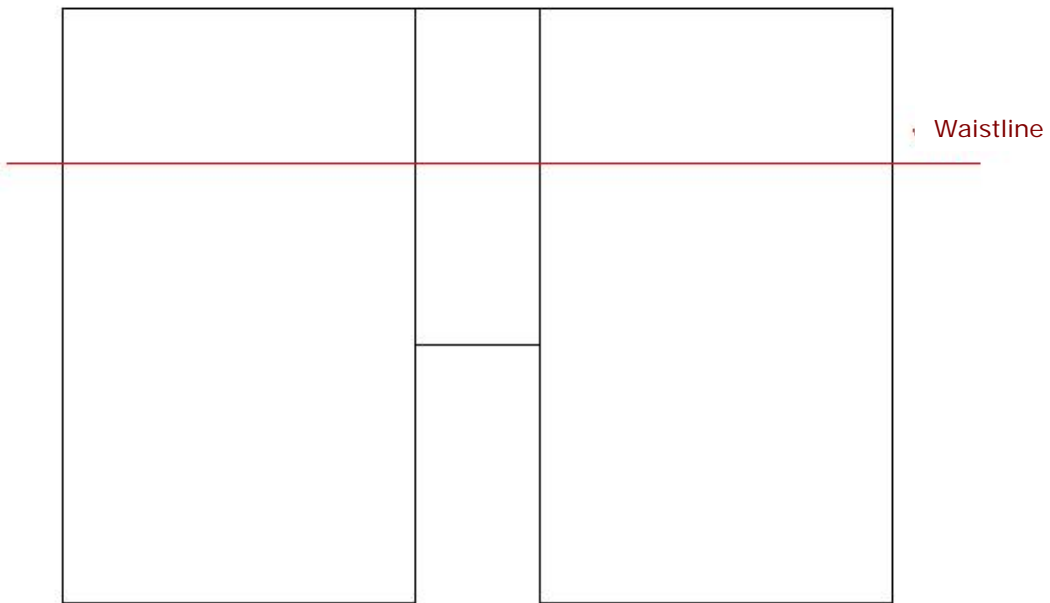
Pattern 1.4

Copyright © I. Marc Carlson 2006

<http://www.personal.utulsa.edu/~marc-carlson/cloth/trousers/braiestest1.gif>



Fabric Layout



Garment Diagram

Pattern 1.5

This one is similar too (though not identical) to the pattern suggested here:



Pattern 1.6

Copyright © I. Marc Carlson 2006

<http://www.personal.utulsa.edu/~marc-carlson/cloth/trousers/braipatterns2.gif>

So far, I have only made pattern 1. I am not thoroughly pleased with the result:

- The legs aren't full enough
- The seat and crotch aren't folding up/wrinkling/hanging quite the way of the illuminations (and the bottom seam of the crotch is being pulled forward oddly. I think this is due to the pattern using the same rise (distance from waist to the bottom of the crotch) for the front and back of the braies, which is not how the body is designed.
- The hem of the braies doesn't look quite like the pictures; the slits are both on the outside of the leg and when pulled up the way they wrap around the leg and hang open isn't quite like you see in the illuminations. I am not convinced that the pictures are actually showing an angled hem line.
- The pattern is all bias cutting which seems odd for this time period, given the loose fitting nature of the braies. Thirteenth century hose were probably cut on the bias, so they had some familiarity with using the bias, it just strikes me as odd to apply it to this garment.

However, I did really like the way the coulisse worked for rolling down and getting that poofy waist stuff which is why patterns 2, 3 and 5 all have a non-standard waist placement.

On the Subject of Women's Braies

There is nothing in the Maciejowski Bible that can be used as an argument for or against braies for women. It is possible that women wore no underpants at all. It's possible they wore braies just like the men's. It's possible they wore some other style of underpants. The only women in a state of undress in the Maciejowski Bible are either entirely nude or covered with blankets from the waist down, so no conclusions can be inferred.

Hose in the Maciejowski Bible
Images of Men's Hose



Figure 2.1 Folio 12v
Gideon is called to rescue Israel from Midian.



Figure 2.2 Folio 35v
The Philistines hang Saul's body from the walls of Bethshan



Figure 2.3 Folio 18r
Ruth compromises Boaz



Figure 2.4 Folio 35v
Warriors of Jabesh-Gilead take down Saul's body



Figure 2.5 Folio 28v
David brings Goliath's head to Saul



Figure 2.6 Folio 33r
David shears off a piece of Saul's Mantle in the cave at Engedi

Legs

In the pictures above (especially the two showing Saul's decapitated body, figures 2 and 4) the hose are obviously not joined at the crotch but are completely separate – more like modern women's thigh-highs than like tights.

Feet

There are no pictures of hose-covered legs without shoes, so it is impossible to be sure from the images in the Maciejowski Bible that the hose had feet (vs. stirrups or simply ending at the ankle). I'd guess the hose had feet attached to them for three reasons:

1. The extant examples from the 14th and 15th centuries have feet.
2. Foot coverings provide an extra layer of warmth and protect the foot from the leather of the shoe. None of the pictures in the Maciejowski Bible suggest that they wore socks or wrapped their feet in rags to provide this protection.
3. Feet or stirrups keep the hose from riding up the leg when you're wearing them. Stirrups occasionally show up in late 15th century art, but not frequently before that time.

However, it's impossible to say for sure.

Attachment

The two pictures of the decapitated Saul (figure 2 and 4) show that his hose are held up by cords at the front of each thigh. I would argue that the cords are suspended from whatever cord or waistband is holding the braies up. I make this assertion based on the two pictures showing men wearing only braies working in the fields that have cords

dangling from their waists, which are being used to keep the braies out of the way (figures 1 and 3).

None of the pictures are clear enough to show how the cords are holding up the hose. It could be:

1. The cord is tied through an eyelet
2. The cord is tied around a wadded up bundle of the hose (this is the method that seems to be used for keeping the braies out of the way. I'm told this method works even better if you stick a button or small stone within the wad to keep it from slipping. However, the hose attachment doesn't seem drawn in quite the same way as the braies being tied up. But that may just be due to the different resolution/size of the images depicted.)
3. The cord could be held to the hose by a broach. Master Emrys Eustace, hight Broom in his paper "Sherts, Trewes, & Hose .iij.: Chosen Hosen"³ suggests this method for 14th century hose:

“at the Battle of Wisby gravesite [1361 in Gotland], where masses of soldiers were buried in full armor immediately after the battle out of fear of the plague. Multitudes of corpses, from whom the clothing had long since rotted off, had annular brooches fused to their thighbones (as opposed to a penannular brooch, these are a complete circle). Apparently, the cloth of both the trewes & the top of the hosen were drawn through the ring far enough to slide over the brooch pin tip, thus pinning them together.”

Personally, I lean towards option 1 due solely to the figure 4; I think it looks like the cord is tied to itself above the top of the hose. However, it's only a single somewhat fuzzy image.

Men's Hose Colors

Methodology

The most serious methodological problem is that many of the colors are subjective; especially for the color of the hose, which with shading could get rather muddied – was it a light blue or a gray? Green or gray? White or the pink/tan of the parchment color, light brown or the pink/tan parchment color? Therefore the numbers are not completely reliable. In fact, when I re-did the count for the first 14 folios myself the results were different. The proper method to address such “coder reliability” issues is to have many people repeat the same measurements. However, since it took me approximately 8 hours to do the initial count, that process doesn't seem feasible.

There are two other known issues:

1. Pigments weren't identical between folios (which is consistent with multiple illuminators and the need to remix the pigments). This contributes to the coder

³ <http://www.greydragon.org/library/underwear3.html>

- reliability issue. Because of these difficulties I conflated the bright red and the “normal red” of the illuminations, as well as the light blue and the royal blue.
2. I couldn't always figure out which tunic the feet belonged too. This accounts for the “Unknown” category.

Using Art as a Source for Textiles

While the analysis of colors is very interesting to me, I also have to address the fact that pigments are not the same as dyes and what is used in the manuscript is not necessarily reflective of what people wore. I have two answers to this complaint: First, my goal is usually to look like I stepped out of a picture. That requires analyzing the pictures. Second, even with archeological evidence - it's the images that are our best source for how outfits were put together and worn. The archeological record is spotty, and generally we don't have entire outfits. We have bits and pieces here and there (at least during this period. upper class Renaissance graves from what little reading I've done on the topic are more complete, when they haven't been pillaged). Therefore, period images are the best place to look for medieval color aesthetics and to get an idea of what garments were worn together.

Colors in illumination don't necessarily reflect the colors worn. It is my belief that black hose when paired with long gowns was mostly the illuminator being lazy – since the shoes are almost always black, and there was just a sliver of ankle between the top of the shoe and the bottom of the gown, why not use the same color? This was suggested to me when one of the images (very unusually) shows 3 men in a row (behind a table) that all have black hose. It's the only place in the Maciejowski bible that I noticed where multiple men standing next to each other have the same color hose. For men wearing shorter hose, I'd guess that using the parchment as the hose color, and just adding in shading was the lazy illuminator's choice, but there is nothing to suggest this.

Findings

		Tunic Color*								Totals No. Hose	
		Blue	Brown	Gold	Gray	Green	Pink/Tan	Red	White		Unknown
Hose Color	Black**	5	4	1	3	3				4	29
	Blue	1	23	5	19	24	9	55	13	9	158
	Brown	4	5			2		2			13
	Gold				1		2				3
	Gray	10	3		1	22		22	1	4	63
	Green	21	37	4	28	1	3	93	6	13	206
	Pink/Tan	21	3		2	28	1	1		1	57
	Red	69	4	2	34	40			15	9	173
	White	51	9	2	7	59	3	15	4	9	159
	Totals No. Tunics***	182	88	14	95	179	18	197	39	49	861

Table 2.1

* I counted the under tunic color as the tunic color that was paired with the hose when multiple layers of tunic were visible.

** Some of the black hose paired with long robes may be ankle boots rather than black hose.

*** The total number of tunics is only the total number of tunics that were paired with hose. I did not count the color of tunics when the hose could not be seen.

Many of my initial impressions turned out not to be completely true:

1. I thought black hose were only paired with long tunics. Not true. There are 2 examples (out of 29) that were paired with a short (ish) tunic.
2. Initially I thought that the tunic and hose were never the same color. Also not true: 13 out of 861 male figures (about 1.5%) have matching hose and tunic. Although those 13 tend towards the "bland" pigments. (I.e. red is never used for both tunic and hose).
3. Red hose with blue tunics are NOT the most common pair. Actually it's green hose with red tunic that is the most common - it alone represents 10.8% of all male figures. No other color pair comes close to those numbers. Possibly this is because green hose + red tunic is garb chosen for David, who is the "protagonist" of the last half of the Maciejowski Bible (which only shows scenes from the Old Testament). However, it's a common configuration in the first half of the manuscript as well.
4. The only observation that I made early on in the project which turned out to be completely true is that the colors of tunic and hose are not equally popular - Red, Blue, and Green are the top three most popular tunic colors, but for hose the top three are Green, Red, and White (with Blue running a very close fourth).
5. The color pairs of tunics and hose cannot always be inverted. For example, there were 37 brown tunics with green hose, but only 2 green tunics with brown hose.

(See table 5 below for the complete list of non-reversible pairs). Some pairs are as popular in either configuration (see table 6 for this list). But not all.

- Black is a hose color but it is never a tunic color. It's only used for hose and shoes, although this may be because artistically black is used for lines.

Percent of Total that Each Hose/Tunic Pair Represents

		Tunic Color*								
		Blue	Brown	Gold	Gray	Green	Pink/Tan	Red	White	Unknown
Hose Color	Black	0.6%	0.5%	0.1%	0.3%	0.3%	0.0%	1.0%	0.0%	0.5%
	Blue	0.1%	2.7%	0.6%	2.2%	2.8%	1.0%	6.4%	1.5%	1.0%
	Brown	0.5%	0.6%	0.0%	0.0%	0.2%	0.0%	0.2%	0.0%	0.0%
	Gold	0.0%	0.0%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%
	Gray	1.2%	0.3%	0.0%	0.1%	2.6%	0.0%	2.6%	0.1%	0.5%
	Green	2.4%	4.3%	0.5%	3.3%	0.1%	0.3%	10.8%	0.7%	1.5%
	Pink/Tan	2.4%	0.3%	0.0%	0.2%	3.3%	0.1%	0.1%	0.0%	0.1%
	Red	8.0%	0.5%	0.2%	3.9%	4.6%	0.0%	0.0%	1.7%	1.0%
	White	5.9%	1.0%	0.2%	0.8%	6.9%	0.3%	1.7%	0.5%	1.0%

Table 2.2
I've highlighted those pairs that are above 5% of the examples.

For a given hose color which hose color is the most likely?

(e.g. No. of hose+tunic Pairings/total No. of times that color hose appears)

		Tunic Color*								
		Blue	Brown	Gold	Gray	Green	Pink/Tan	Red	White	Unknown
Hose Color	Black	17.2%	13.8%	3.4%	10.3%	10.3%	0.0%	31.0%	0.0%	13.8%
	Blue	0.6%	14.6%	3.2%	12.0%	15.2%	5.7%	34.8%	8.2%	5.7%
	Brown	30.8%	38.5%	0.0%	0.0%	15.4%	0.0%	15.4%	0.0%	0.0%
	Gold	0.0%	0.0%	0.0%	33.3%	0.0%	66.7%	0.0%	0.0%	0.0%
	Gray	15.9%	4.8%	0.0%	1.6%	34.9%	0.0%	34.9%	1.6%	6.3%
	Green	10.2%	18.0%	1.9%	13.6%	0.5%	1.5%	45.1%	2.9%	6.3%
	Pink/Tan	36.8%	5.3%	0.0%	3.5%	49.1%	1.8%	1.8%	0.0%	1.8%
	Red	39.9%	2.3%	1.2%	19.7%	23.1%	0.0%	0.0%	8.7%	5.2%
	White	32.1%	5.7%	1.3%	4.4%	37.1%	1.9%	9.4%	2.5%	5.7%

Table 2.3

For a given tunic color which tunic color is the most likely?

(e.g. No. of hose+tunic Pairings/total No. of times that color tunic appears)

		Tunic Color*							
		Blue	Brown	Gold	Gray	Green	Pink/Tan	Red	White
Hose Color	Black	2.7%	4.5%	7.1%	3.2%	1.7%	0.0%	4.6%	0.0%
	Blue	0.5%	26.1%	35.7%	20.0%	13.4%	50.0%	27.9%	33.3%
	Brown	2.2%	5.7%	0.0%	0.0%	1.1%	0.0%	1.0%	0.0%
	Gold	0.0%	0.0%	0.0%	1.1%	0.0%	11.1%	0.0%	0.0%
	Gray	5.5%	3.4%	0.0%	1.1%	12.3%	0.0%	11.2%	2.6%
	Green	11.5%	42.0%	28.6%	29.5%	0.6%	16.7%	47.2%	15.4%
	Pink/Tan	11.5%	3.4%	0.0%	2.1%	15.6%	5.6%	0.5%	0.0%
	Red	37.9%	4.5%	14.3%	35.8%	22.3%	0.0%	0.0%	38.5%
	White	28.0%	10.2%	14.3%	7.4%	33.0%	16.7%	7.6%	10.3%

Table 2.4

Color combinations of tunics and hose that cannot be reversed

Color Combination	Tunic, Hose	Hose, Tunic	Difference in Percent	P-Value
Brown, White	9	0	100.0%	0.00
Blue, Gold	0	5	100.0%	0.03
Brown, Green	37	2	89.7%	0.00
Green, White	59	6	81.5%	0.00
Green, Pink/Tan	28	3	80.6%	0.00
Gray, White	7	1	75.0%	0.02
Blue, Brown	4	23	70.4%	0.00
Blue, White	51	13	59.4%	0.00
Blue, Pink/Tan	21	9	40.0%	0.01
Green, Red	40	93	39.8%	0.00

Table 2.5

Color combinations of tunics and hose that are reversible

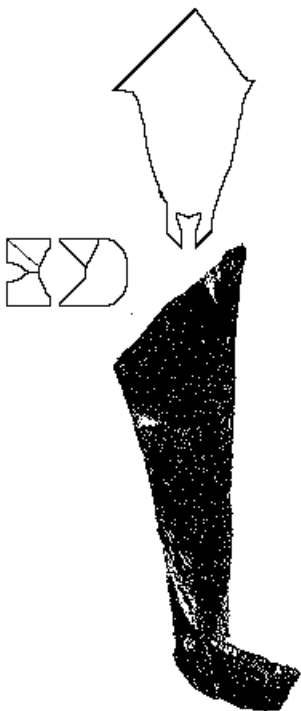
Color Combination	Tunic, Hose	Hose, Tunic	Difference in Percent	P-Value
Brown, Gold	0	0	0.0%	
Red, White	15	15	0.0%	0.50
Blue, Green	21	24	6.7%	0.33
Blue, Red	69	55	11.3%	0.10
Gray, Green	28	22	12.0%	0.20
Gray, Red	34	22	21.4%	0.05
Blue, Gray	10	19	31.0%	0.05
Brown, Red	4	2	33.3%	0.21
Gold, Green	4	0	100.0%	0.06
Brown, Gray	3	0	100.0%	0.125
Brown, Pink/Tan	3	0	100.0%	0.125

Pink/Tan, White	3	0	100.0%	0.125
Gold, Pink/Tan	0	2	100.0%	0.25
Gold, Red	2	0	100.0%	0.25
Gold, White	2	0	100.0%	0.25
Gray, Pink/Tan	2	0	100.0%	0.25
Gold, Gray	0	1	100.0%	
Pink/Tan, Red	0	1	100.0%	

Table 2.6

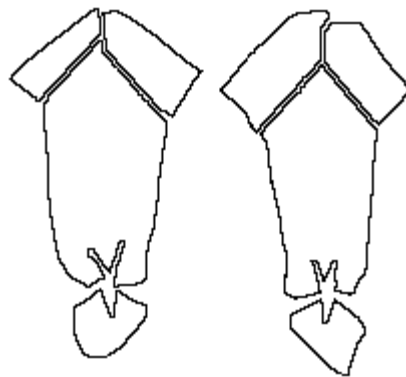
Construction of Men's Hose

First, I found Master Emrys Eustace, hight Broom's classes and handouts on hose and underwear incredibly useful: <http://www.greyclad.org/library/underwear3.html> and <http://www.greyclad.org/library/underwear1.html> and suggest you start there when thinking about the construction of hose, especially for the seam details. For the construction of the foot I suggest you look at Marc Carlson's website (<http://www.personal.utulsa.edu/~marc-carlson/cloth/hose.html> especially the Nockert Hose Type 1)



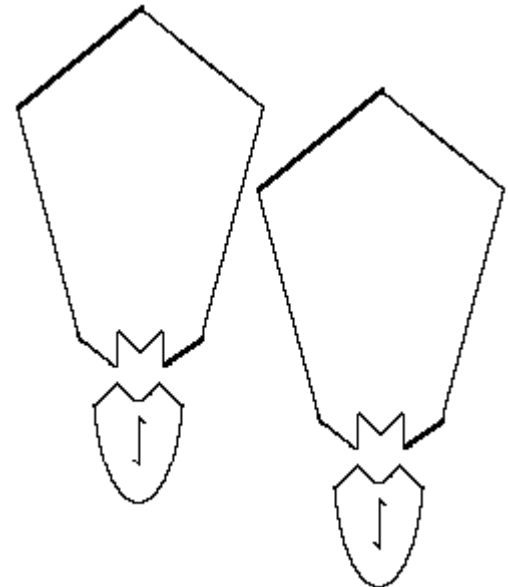
Pattern 2.1
Copyright © I. Marc Carlson 1997

From the Greenland finds dating to about the 14th or early 15th century.⁴



Pattern 2.2
Copyright © I. Marc Carlson 1997

This pair of hose from the 1200s is ecclesiastical in nature, and was found in grave 19 of the Bremen site in Germany.⁵



Pattern 2.3
Copyright © I. Marc Carlson 2004

From the Bocksten Bog Man, Sweden, dated between 1290-1430 (usually thought to be 14th century).⁶

⁴ Carlson, Marc I. <http://www.personal.utulsa.edu/~marc-carlson/cloth/herjol88.html> [Nov 17, 2010]

⁵ Carlson, Marc I <http://www.personal.utulsa.edu/~marc-carlson/cloth/bremen2.html> [Nov 17, 2010]

⁶ Carlson, Marc I <http://www.personal.utulsa.edu/~marc-carlson/cloth/bockhose.html> [Nov 17, 2010]

The construction method I subscribe to isn't mine - it's cribbed from a couple classes I took at Pennsic 36 (2007). It's really a draping method:

1. Draw a long chalk line along the bias starting from one corner of your wool fabric, about 4 feet long.
2. Your model should be wearing his braies. Attach the corner with the chalk line to the cord hanging from the braies.
3. Wrap the fabric around your model's leg, pinning the seam up the back of his leg. Make sure that the chalk line runs down the center front of his leg. Do not pin the ankle yet. It will ruck up at the foot/ankle area.
4. At either side of the heel, make a cut from the floor to the ankle bone, such that the fabric lays flat along the top of the foot.
5. Have your model sit down. Pin the heel and ankle along the center back seam, this seam should be wrapped around the bottom of the foot, covering the sole of the heel as well as the back of the heel. Do not make the ankle too tight; remember the widest part of the foot will have to be able to get through the ankle area.
6. Wrap a piece of fabric around your model's foot. There are two seam lines. The seam that makes the fabric a cone shape goes down the center of the sole. The other goes around the wearer's foot, attaching the toe piece to the heel and ankle. The toe of the hose are going to be slightly pointed.

There are two useful dress diaries for making hose (although they're focused on women's hose, the difficult foot part is the same for both genders, even if the leg shapes are slightly different.)

- <http://www.angelfire.com/zine/kiarapanther/garb/stocking1.html>
- http://katerina.purplefiles.net/garb/diaries/FLCalze_new_pattern1.html

Images of Women's Hose



Figure 2.7 Folio 12v
Jael slays King Sisera



Figure 2.8 Folio 14r
Manoah and his wife give sacrifice.



Figure 2.9 Folio 17r
Ruth and Naomi



Figure 2.10 Folio 18r
Ruth threshes grain for Naomi (both figures are Ruth)

Women's Hose Colors

		Dress Color					Total No. of Hose
		Blue	Brown	Gray	Red	White	
Hose Color	Blue, tone-on-tone striped	1					1
	Green		1			2	3
	Green, tone-on-tone striped		1	2	2	1	6
	Red		1				1
	White	1				2	3
	Total No. of Tunics	2	3	2	2	5	14

Table 2.7

There are only 14 images showing women's hose/sock color, which isn't a lot to draw conclusions from. However, it is suggestive that *none* of the men's hose are striped, while half of the women's hose are striped. The 7 instances of striped socks show stripes of two different tones of the same color (green or blue) going horizontally around the leg.

None of the pictures show the top of the women's leg wear; it could be hose like the men's, or it could be socks ending below or above the knee. It is possible to get stripes either from weaving (although horizontal stripes would be more difficult if the socks are cut on the bias) or from sewing (which is an easier way to get stripes on the bias, but is slightly wasteful of fabric) or the stripes might be achieved via knitting, or naalbinding. One of the earliest examples of "true" knitting is a pair of gloves from the Monasterio de Las Huelgas in Burgos (Spain) dating to about 1245.⁷ There are extant naalbound stockings dated to the 13th century; the Delemont stockings from Switzerland. These are very fine work and have attached ribbon garters. They are knee length and are supposed to have belonged to a bishop, St. Germanus.⁸ Their existence suggests strongly that naalbinding was used throughout Western Europe, not just Scandinavia, however, there is no definitive documentation for either knitting or naalbinding in France circa 1250.

Since we never see a woman's knees, it's not possible to determine if they're wearing hose or socks, nor is it possible to say if they're wearing garters (e.g. a strip of fabric, braid, leather, etc. tied below the knee to keep socks up). There are no instances of men wearing garters in the Maciejowski Bible, unlike in images from later periods. The earliest story about the founding of the English Order of the Garter (founded 1348, 100 years after the Maciejowski Bible was illustrated) is that the king, Edward III, retrieved a ladies garter which had fallen during a dance and tied it around his own leg. In defiance of teasing by members of his court, Edward responded "shame unto him who thinks ill of it" and created the Order of the Garter⁹. This story means that (at least in England) women were wearing garters in the 14th century. There are also extant examples of 14th century woven cloth garters found in London excavations¹⁰. The use of garters suggests that women were wearing knee-socks, rather than full-length hose. The reason men work garters was to keep the hose flush to the leg, but this would be less important for women, as their legs were usually covered by skirts. Unfortunately, the Maciejowski illustrations offer no guidance.

Construction of Women's Hose/Socks

First, a definition of terms: I'm using hose to mean leg coverings that are held up by ties that are suspended from the waist. Socks are leg coverings which are mid-thigh or shorter in length and held up by garters tied at the knee.

Hypotheses:

⁷ Many thanks to Chris Laning (known as Dame Christian de Holacombe, OL in the SCA) for this reference. You can see a photograph of the gloves at http://www.sfwaldorfhighschool.org/NewsAndEvents/XVI-1_Spring_09.pdf (page 12)

⁸ Again, thanks go to Chris Laning (known as Dame Christian de Holacombe, OL in the SCA) for this reference. I believe the book to go to for more information on the Delemont stockings is *Mittelalterliche Textilien in Kirchen und Klöstern der Schweiz* by Brigitta Schmedding.

⁹ Crane, Susan. *The Performance of Self*. Pg. 137

¹⁰ Crowfoot, Elizabeth and Frances Pritchard, and Kay Staniland. *Textiles and Clothing, c.1150-1450*. Pg. 143-4

1. Women are wearing the same style hose as men, cut on the bias¹¹.
2. Women are wearing fabric socks cut on the bias. (i.e. the socks are not held up by something attached to the waist)
3. Women are wearing fabric socks cut on the straight of grain¹²
4. Socks were knitted or made using naalbinding techniques

I prefer hypotheses 3 and 4, but all are viable given the images in the Maciejowski Bible.

Option 1 & Option 2: Women are wearing bias-cut socks or hose

The cut of this option is discussed in the men’s section. It requires that the socks be cut on the bias. If you want bias-cut socks with horizontal (or vertical) stripes, the easiest way I know to do it is to cut bias strips from 2 different fabrics. Sew the strips together along the long edge and cut the pattern out, aligning the bias mark on the pattern with the bias of the created material.

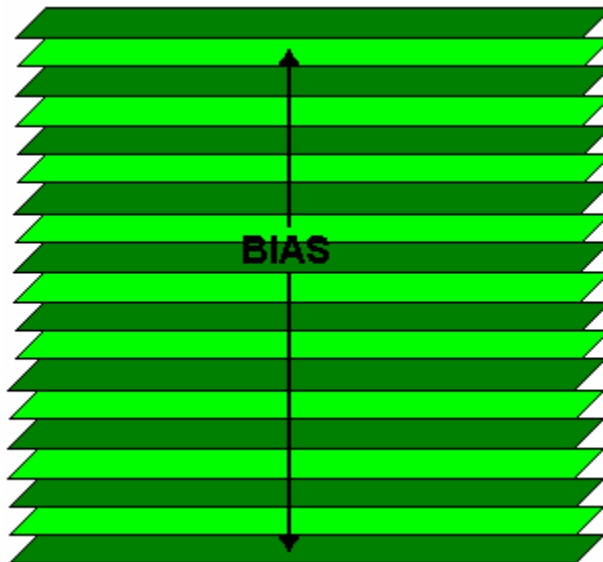


Figure 2.11
Each green row is a bias strip, thus the bias runs vertically across the cloth

Option 3: Women are wearing fabric socks cut on the straight-of-grain

This hypothesis lends itself to using striped fabric; the straight-of-grain runs up and down the shin and a vertical seam runs along the back of the calf. There are three examples of this construction:

¹¹ Nockert Hose Type 1

¹² Nockert Hose Type 3 or Type 4



Pattern 2.4

Copyright © I. Marc Carlson 1997

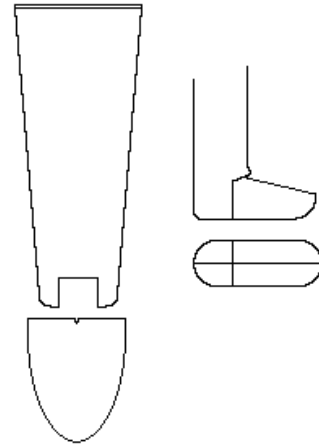
From the Greenland finds dating to about the 14th or early 15th century.¹³



Pattern 2.5

Copyright © I. Marc Carlson 1997

From the Greenland finds dating to about the 14th or early 15th century.¹⁴



Pattern 2.6

Copyright © I. Marc Carlson 1998

Composite pattern based on the Baynard's Castle Dock finds in London, dating to the latter half of the 14th century.¹⁵

None of these patterns are from 13th century France, but there aren't a lot of extant examples to look at. To make these I suggest draping the fabric on the leg, and patterning from there.

Option 4: Women are wearing knitted or naalbound socks

I can't really speak to the construction for hypothesis 4, as I don't know how to knit or how to do naalbinding. I use this hypothesis as my excuse to purchase my socks. (I like www.SockDreams.com's over-the-knee striped socks, but there are lots and lots of vendors available).

¹³ Carlson, Marc I <http://www.personal.utulsa.edu/%7Emarc-carlson/cloth/herjol90.html> [Nov. 17, 2010]

¹⁴ Carlson, Marc I <http://www.personal.utulsa.edu/%7Emarc-carlson/cloth/herjol91.html> [Nov. 17, 2010]

¹⁵ Carlson, Marc I <http://www.personal.utulsa.edu/%7Emarc-carlson/cloth/london.html> [Nov. 17, 2010]

Shirts & Shifts in the Maciejowski Bible

Images of Men's Shirts



Figure 3.1 Folio 5r
Joseph is cast into the pit.

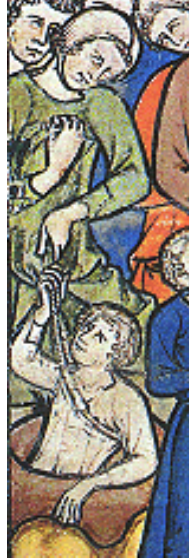


Figure 3.2 Folio 5r
Joseph being pulled from pit to be sold to the Ishmaelites



Figure 3.3 Folio 17v
Boaz, seeing Ruth gleaning in his field, asks his forman whose damsel she is.

The neckline here might be showing the neck of the shirt beneath the tunic.



Figure 3.4 Folio 25r
Agag is brought to Samuel



Figure 3.5 Folio 25r
Agag is brought to Samuel, who hews him in pieces.



Figure 3.6 Folio 35r
The Philistines cut off Saul's head.



Figure 3.8 Folio 35r
The Philistines strip the bodies of Saul and his sons.



Figure 3.7 Folio 43
Amnon's lust for his sister Tamar is turned to hatred and he shamefully sends her away.

This is presumably his shirt, since the sleeves aren't long enough to be his tunic.



Figure 3.9 Folio 28v
Jonathan, smitten with love of David, gives him his garments.



Figure 3.10 Folio 40v
Hanun shames David's ambassadors.

It's interesting that the shirt makes no appearance in this scene.

Neckline

The neck can be either a V or key-hole (although a key-hole neckline can look like a V-neck if the edges have folded under, so the key-hole is less problematic.)

Hem

The hem of the shirt falls between mid-thigh and just above the knee. The fact that there is no shirt showing in figure 10 may suggest that it could be even shorter than mid-thigh.

Sleeves

Figures 1, 2, 6, and 8 all have long sleeves with a tight wrist. Figure 2's upraised hand actually shows that the wrist is slit to give access for the hand (since the slit on the upraised arm is unfastened and folded back.) Figure 7 may be showing a $\frac{3}{4}$ length sleeve, or (more likely in my opinion) it's showing a long sleeve that is unfastened and pushed up the arm. Figure 15 and 16 (both from Folio 25r depicting Agag) show a short-sleeved shirt, although the ragged edge makes me wonder if the viewer is supposed to interpret the short sleeves as evidence of a rough fight.

Body

I don't think the bodies of the shirts in figures 4, 5, 6, 8 and 9 are as wide as the tunics. However, this could just be an illusion based on the fact that it's seen without the belt. On the other hand, the outer tunic will lay more smoothly if the underclothes are narrower.

Images of Women's Shifts



Figure 3.11 Folio 10v
The Gibeonites make peace by craft.



Figure 3.12 Folio 15r
Dellilah cutting Samson's hair



Figure 3.13 Folio 18r
Ruth brings her grain to Naomi.



Figure 3.14 Folio 19r
Naomi fondles the newborn Obed

This one must be short in length, if it is the shift.



Figure 3.15 Folio 19v
Samuel is born to Hannah

More white sleeves of the under-gown.



Figure 3.16 Folio 38r
The slaying of Ishbosheth

Another set of white sleeves for under gown.



Figure 3.17 Folio 41v
David sees Bathsheba bathing.

Another set of white sleeves for under gown



Figure 3.18 Folio 42v
A son is born to David and Bathsheba.

Probably a shift, but it might be her gown; the state of undress in bed varies from nude to fully clothed.



Figure 3.19 Folio 7v
The hiding of the infant Moses.
(Moses' mother is in bed)

The tight white sleeves may be an underdress or they may be her shift.



Figure 3.20 Folio 19r
Ruth gives birth to Obed.

There are no pictures showing the entire shift; I am interpreting the white sleeves of the under-tunic as a shift, simply because every time the under layer is shown it is white(ish). This may be a misinterpretation.

Neck

There are only two pictures that show the shift's neckline. Figure 15 shows a high keyhole neck fastened with a broach. Figure 18 shows a V neck (although, as I said for the men's shirt, an unfastened key-hole neckline can look a whole lot like a V neck).

Sleeves

Figures 13, 14, 15, 18, 19, and 20 all have long sleeves with a tight wrist. These wrists are tight enough that it doesn't look like the hand can slip through them without loosening them.

Figures 11, 15, 16, and 17 all show looser sleeves that are pushed up slightly. These may be full-length sleeves that are pushed up, or they may be $\frac{3}{4}$ length sleeves. Figure 16 may show the same type of turned-back cuff that we saw in figure 2, but it is not as clear.

Length

It's not clear how long the shift is. You can make the argument that the cream under-dress in figure 12 is the shift. If so, then the shift is ankle length. However, if that were always the case we'd expect to see the shift in figure 13 when Ruth has her dress hiked up.

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