

*As standards in historical re-enactment keep moving steadily forward, more and more people are looking to improve the quality of the costumes they are wearing. This brief guide is aimed at helping those new to the subject avoid the mistakes commonly made in the early days of the hobby, and to help experienced historical re-enactors create more authentic costumes.*

As someone who once earned my living as a professional archaeological conservator/restorer I was involved with making museum replica's long before I got into the hobby of historical re-enactment. Having got used to certain ways of "doing things" I found that standards and attitudes outside of the professional aspect of making replicas for museums varied enormously. It is probably still true to say the average re-enactor likes to dress up to impress their mates, creating their own "look" by cherry picking the most elaborate finds from the best sites, more than they like to dress down to replicate what the evidence suggests was typical of the period. However, levels of historical accuracy or authenticity that were once mocked as elitist by weekend enthusiasts are now being more widely hailed as the way to proceed. I'd therefore like to put forward a few brief thoughts that stem both from having worked alongside two of this country's leading archaeological textile specialists, as well as through many years of reproducing period costumes for use within the various re-enactment societies to which I have belonged.

It's true to say we can state almost nothing with absolute certainty about the cut of typical period clothing. Much of what we claim to know has to be inferred from decorative carvings or illustrations which usually give stylised portrayals of the wealthy elite rather than accurate reproductions of what was once ordinary. We may also benefit from the very rare find of part of a garment which is sufficiently complete as to indicate something of its construction, though these again may be biased in terms of high status or non standard examples. However, whilst we know very little about period garments we do have thousands of scraps of cloth recovered from archaeological excavations. We can therefore say with more confidence the sorts of textiles that were being produced around one thousand years ago.

I'll briefly start with leathers before moving on to woven textiles. Up until the mechanisation of spinning and weaving, leather was cheaper and also more hard wearing than woven cloth. Look through almost any period of history and it's been used for making all manner of utilitarian clothing, often for labourers and working men. Only very recently as the price of woven cloth has fallen to almost negligible levels has leather changed to being viewed as the more expensive luxury option. On this basis leather should probably be most commonplace amongst those portraying the lower orders of society rather than those portraying the wealthy. Sadly though, other than shoes, we haven't any complete surviving garments from our period on which to base reconstructions or back up any firm conclusions about the above.



If you want to wear leather clothing, and there are strong historical arguments for doing so, it will probably take some effort to find suitable skins of a period style, as opposed to the commonplace modern shiny leathers. Many re-enactors do seem to love leather costume, though sadly, you may occasionally see some societies whose members use so much of the "wrong" kinds of leather, they albeit unintentionally, end up looking like a "Biker" convention. Almost all modern leathers are extensively dressed to achieve a uniform regular thickness and surface finish. (the smooth, fault free surface most associate with modern tanned leather often comes about as a result of mechanical abrasion to remove the top surface of the skin, followed by impressing with a textured roller to re-apply a regular "leather grain", commonly finishing with dyeing the skin a "natural" colour to achieve a more uniform and commercially saleable product.) This can be just as common with the veg-tanned tooling leathers that many re-enactors proudly claim as being "authentic to the period". Very few period leathers would have been hand-dressed to the same extent, and consequently they showed much greater variation in natural growth marks, creases and irregular texturing. If you want undressed leathers straight from the tanning pit ask for "crust leather" and be prepared to dress the surface yourself. Bear this in mind when making reproduction turn shoes, as having dealt with numerous period examples when working as a conservator, I can state with a fair degree of confidence that most weren't as smooth and polished as the modern replicas you'll see.



The following recommendations relate to woven textiles and are based upon study of a wide variety of surviving cloth fragments, though they may be somewhat biased in favour of the well recorded and possibly higher status finds from York and London. I'd encourage people to keep as close to these recommendations as you are able, but bear in mind they are only simplified guidelines not rigid rules.

Yarn for woven cloth was spun from various natural fibres. Sheep's wool was the most common although goat or other animal hair was also used. Plant fibres like linen were more difficult to turn into cloth, but were popular as it can be more comfortable and garments easier to clean and launder on a regular basis. Nettle was a similar fibre well suited to making textiles, whilst silk was a very valuable foreign import only used by the very rich.

I think at this point it is important to try get across some sense of the value of woven cloth around a thousand years ago. Modern manufacturing methods have reduced clothes to something cheap and disposable we can discard or replace on a whim of fashion. If you have to gather and process all the fleece by hand, spin all your yarn by hand on a drop spindle, warp up your loom and hand weave several yards of cloth to cut and hand sew into an item of clothing, you value your cloth and clothes far more highly.

To produce a basic woollen tunic or dress in fairly coarsely woven cloth is going to take, very approximately, 6km to 10km of hand spun yarn. If we are to produce something finer and more luxurious, that figure could easily exceed 20km of yarn. Gathering and preparing the fleece for spinning would be by far the most time consuming aspect of making clothes, spinning yarn was also very time consuming whilst weaving and hand sewing were comparatively quick. Whilst I have never seen a re-enactor single-handedly make such a garment starting from raw sheep's fleece, I do know many hand spinners and weavers who have attempted to calculate how long it would take to produce such a garment from scratch. Estimates have ranged considerably between about 400 and 1200 hours of work to create one coarsely woven, plain garment. A finely woven, dyed and embroidered garment would take significantly longer. Whilst the lower end of these time scales may perhaps better reflect the higher levels of proficiency of our ancestors, looked upon in this way it is easy to see why clothes were so highly valued, why people owned comparably few of them, and why they would be so extensively cared for, patched, darned and passed down from person to person.

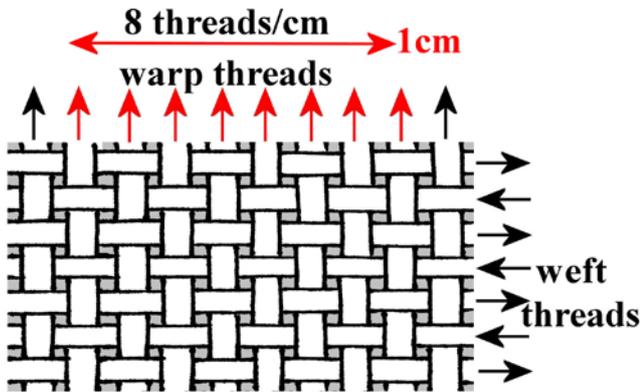
To put a financial value onto period clothes would be difficult as comparatively few would have been traded. The majority of the population would be producing their own from scratch, working as extended family units. Nevertheless to get some appreciation of the value of a single garment think how much you'd expect to earn in the modern world if you'd had to spend the equivalent of several months in full time employment to produce it; probably enough to buy a second hand car. So whilst we may never know how many clothes people of the past owned, or how frequently they would get new clothes, it seems probable that most people would be wearing "old" clothes most of the time.

When it comes to judging the status or relative value of different garments most re-enactors judge cloth by its colour, asking only if it's dyed an "authentic" hue. Any particular piece of cloth may accurately match the colour of a period dye as many colours can be achieved with period dyes, but both historical and archaeological evidence indicates the vast majority of cloth probably wasn't dyed. Nevertheless, the available evidence does suggest that more than half of all period woollen cloth would probably exhibit some degree of "natural pigmentation". By which we do not mean period plant dyes, but that the raw fleece would have been naturally off-white, pale grey, or light brown (the colours of most period breeds of sheep). Whilst these paler hues were common, only a small percentage of fleeces were so heavily pigmented as to be very dark grey/brown or natural blacks. Dying naturally pigmented wool reduces the impact of any colour added to it, and so the white wool was generally reserved for the more expensive cloth which the rich would dye. We have little evidence of naturally pigmented wools being dyed, consequently most cloth and clothing would probably remain un-dyed light grey or pale brown, with the most decorative clothing of the mainstream population possibly using variations of these natural hues to exaggerate the patterned weave of their cloth.



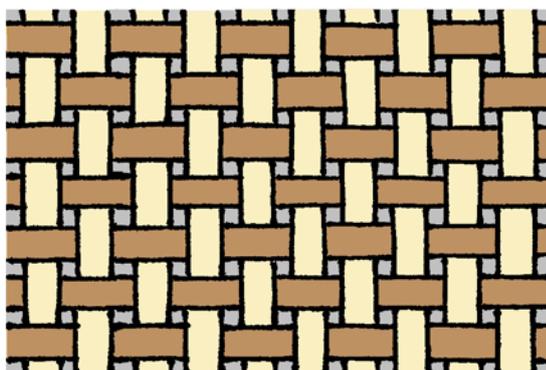
On the subject of dyed cloth you may often hear others claim that the people of this period loved colourful clothing, which I don't doubt was true. However, this is not the same as saying it was commonplace or worn by most people. You will also hear people say that we have lots of archaeological evidence for dyed cloth from this period. This too is also true, but it is subtly different to saying we have evidence for lots of dyed cloth in this period. If we actually consider where all this well publicised evidence is coming from it turns out to be Royal burials, prestigious urban sites, and in the case of perhaps the best publicised finds, a site which based upon the quantities of waste madder found there has been tentatively identified as a professional dye house. None of these are excavations that could be said to be truly indicative of the extent of dyed cloth being used for the everyday clothes of ordinary people. So, if you'll pardon the rather flippant analogy; saying the people of this period loved colourful clothing, may be a bit like saying modern folk love travelling by chauffeur driven limousine:- Something which may in some sense be true, which may on rare or special occasions be within the experience of many ordinary people, but something that would only be normal for a very small minority of wealthy individuals.

So, if the majority of cloth is seemingly un-dyed, you cannot use the colour of the dye to differentiate good cloth from bad, or richer from poorer. You must judge the sett of the weave, measured as the number of threads in a 1cm wide strip of cloth, (the warp count is often marginally higher than the weft count in period textiles) and on the pattern of the weave, that is how the weft thread is woven over/under the warp threads.

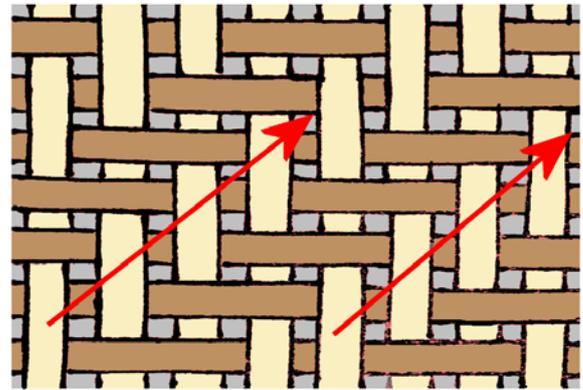


The coarsest wool cloth of our period had thread counts as low as 2-3 threads/cm and was quite a loose open weave more like a net, whilst only a few recovered wool cloths were above 20 threads/cm. Nevertheless the finest Viking wool cloth ever found had a thread count of more than 60 threads/cm which is finer than most silk. The lowest sett, loosely woven cloth was probably used as sacking or for other industrial purposes, but equally one or two low sett examples woven from thicker dyed yarn may have been used for expensive winter cloaks. The most common wool cloth we can tentatively associate with mainstream clothing seemed to have about 7-12 threads/cm. Cloth with a sett well below 12 threads/cm tended to be naturally pigmented. Wool cloth with a sett significantly higher than 12 threads/cm was often dyed, so this figure seems to be a useful, although slightly arbitrary benchmark to distinguish between common cloth and more luxurious textiles used by those wealthy enough to afford them.

The other important point to note is the pattern of the weave. Tabby or plain weave is the simplest and most common, used mainly for un-dyed coarser wool textiles. This is produced where the weft passes over one warp thread and the under the next. As warp and weft thread were usually spun differently, and sometimes from different fleeces, they may occasionally be of subtly different colours giving the cloth a subdued mottled look similar to a modern "Donegal tweed".

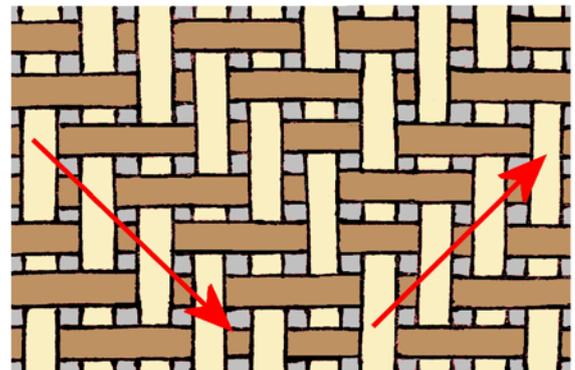


The other common period weaves were twills, which were often, though by no means always, of a higher sett than most tabby woven wool cloth. 2-2 twill is produced where the weft passes over two warp threads then under the next two. If each row of weaving is off set one thread from the previous then diagonal stripes are formed. These are commonly referred to in the modern world as Shetland or cavalry twills.



Breaking the pattern of the weave can change the direction of the diagonal stripes forming chevrons, or herringbone patterns and the most skilful weavers could also produce diamond patterns. Whilst we, in the modern world, may look upon these patterns as purely decorative effects, many period examples show no evidence of strong contrast in colours of warp/weft yarn and it is has been suggested they have been favoured to do with technical reasons regarding the drape and stretch of the cloth.

Perhaps surprisingly, archaeological evidence suggests that only occasionally would boldly different shades or colours of warp/weft yarn be used to exaggerate the visual impact of the woven pattern in cloth, making such things, even in contrasting undyed yarns, perhaps of greater appeal or status. However, with warp and weft usually being spun differently, then cloth with subtly contrasting warp and weft was possibly more common than totally uniform. Those who could afford to dye their cloth often seemed to favour these complex patterns of twill weaving over plain tabby weave, but would do so with white wool, often dyeing all the yarn the same colour. Only with narrow decorative braid do we more regularly find textiles woven with contrasting colours of yarn. However despite their prevalence amongst most re-enactors of this period, decorative multi-coloured tablet woven braid was never particularly common, and some was plain, produced in a single colour simply to bind hems.



Period linens were produced with a fractionally higher sett than most period wool cloth, ranging from about 5 threads/cm to well above 30 threads/cm. The commonest values were around 8-16 threads/cm. This does include some quite coarse cloth which may possibly have been sacking, and a lot of low sett linen actually had fine threads and a loose, open weave. The majority of linen cloth was tabby woven, although finer examples of twills and other complex weaves are also found.

Linen is naturally a pale grey/beige colour but extensive processing or bleaching can easily lighten it to a creamy off white colour, it does however, show far less natural variety of colour than wool. As we have no firm archaeological evidence to support the widespread use of dyed linen cloth in our period I would advise everyone to avoid it. Though this must be countered against the fact we have so little linen that has survived well enough to test for dyes and we do have limited archaeological evidence from earlier and later periods along with odd literary references indicating its occasional use by wealthy individuals. Although not as easy as dyeing wool it can be coloured with entirely period methods and dye stuffs. So, a little dyed linen was probably used in period, but the scarce evidence we do have suggests it was most likely a high status cloth, probably rarer than dyed wool.

There's undoubtedly much more I could have written about, going into much greater detail, but few would be inclined to read every word. After all, the typical re-enactor isn't as interested in achieving the same levels of historical accuracy as a museum. However, I'd just like to finish with what may be viewed as a much more contentious, perhaps some might say elitist, personal thought; That is, as I see things at the moment, most re-enactors seem to avoid un-dyed cloth, treating it as a single homogenous type suitable only for those portraying slaves, rather than a broad and varied mixture of fabrics which should be commonplace and widespread among almost all the people whose lives we seek to recreate. Many re-enactors, often unknowingly, choose to dress in the colourful costume of the very rich nobility, but fail to match this with the corresponding gold and silver jewellery, embroidery, silks, and furs that all indicate extreme wealth. If we develop a greater understanding of what is representative of dress in period society, and of the cloth the majority of clothes were actually made from, there are a huge number of distinctions we can make between different types and qualities of un-dyed cloth.

I acknowledge the following suggestion may require a change of attitude with those that like to dress up. However, once people start to learn a little more about the subject of period textiles I believe it would be a great step forward in terms of authenticity if more re-enactors would restrict their use of dyed costume. If the various re-enactment groups representing this period are to give a more authentic and balanced portrayal of all aspects of life in the past, I feel the majority of us should be "dressing up" in, and learning to recognise the better qualities, weaves and hues of un-dyed cloth, with the lowest ranks "dressing down" in the poorer types of un-dyed cloth. In this way the expensive dyed clothes of the rich minority will actually start to stand out as being something rare, rather than looking like the commonplace norm.

There, that's the preaching over, and if you want to meet up with your mates and dress up in colourful period clothing as a hobby it's not my place to criticise what you do for fun. However, please be honest with yourself: Dressing up because you like the pretty clothes may be a perfectly acceptable reason, but it isn't always compatible with giving a balanced or authentic portrayal of life in the past.

The following images are of various materials I have acquired or produced for making my own reproduction period clothing. Although it's doubtful you'd ever find exactly the same materials as these for your own costume we'd not want every re-enactor dressing in identical outfits anyway. Nevertheless, if we are to represent what was once common or typical of the period there should be an apparent degree of uniformity about the majority of the clothes worn by most re-enactors, as most cloth should be in the un-dyed, naturally pigmented creams, pale greys, light browns and perhaps a little natural black as represented by the samples shown below.

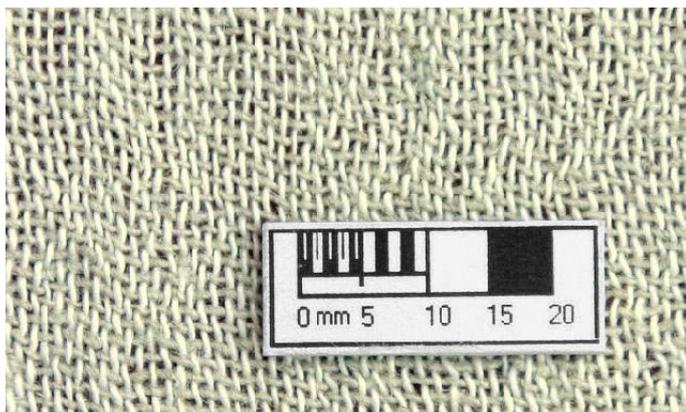
I hope these sample images and the above text proves useful and may, perhaps, change the way you think about making your own replica clothing for use as a re-enactor of this period.



**Leather surface-** Veg-tanned leather with a hand dressed surface still showing many of the natural creases, growth marks and texturing seen in many period leathers.



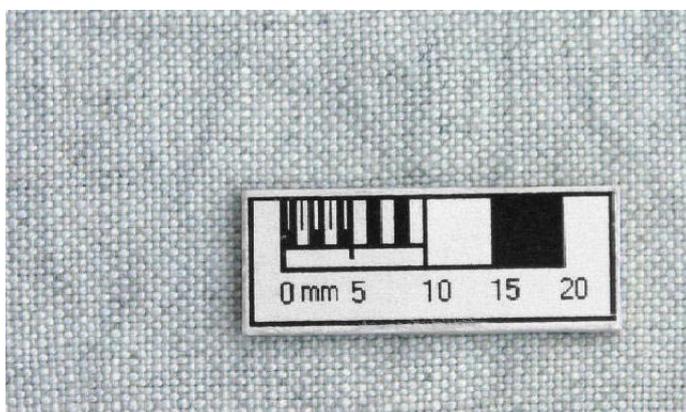
**Linen sack cloth-** (warp/weft count 6x6 threads/cm) I'm sure even a slave might feel mistreated to be wearing such loosely woven low sett cloth made with such a coarse, irregular yarn.



**Loose open weave linen-** (warp/weft count 11x10 threads/cm) This linen is typical of many of the excavated linen samples from our period and although woven from finely spun yarn is quite an open weave resulting in a low sett cloth.



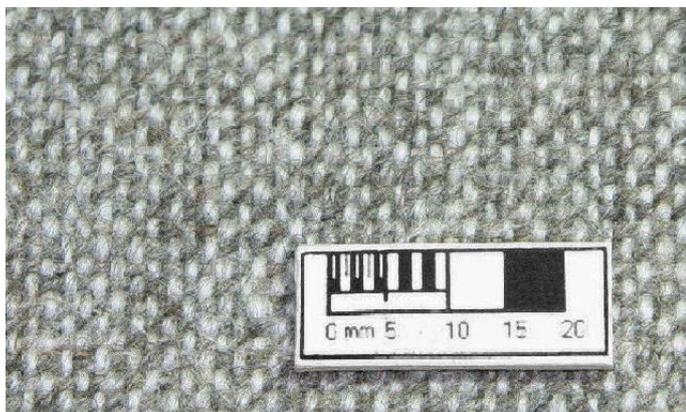
**Plain wool non reversed 2-2 twill-** (warp/weft count 8x7 threads/cm) Non reversed 2-2 twill is quite characteristic of our period but this is another fairly low sett, low status example. This particular photo shows (at least in the original) some of the coarse dark hairy kemp fibres present in many period fleece samples.



**Tight weave linen-** (warp/weft count 18x18 threads/cm) Whilst not using the finest most luxurious yarn, the higher sett and tight weave of this linen would most probably put this at the better quality end of what many ordinary folk would be using.



**Contrasting wool herringbone 2-2 twill-** (warp/weft count 10x10 threads/cm) The use of slightly finer yarn, to give a higher sett, contrasting brown and cream warp and weft, along with breaks in the twill weaving to form a herringbone effect may have made this one of the slightly rarer, though by no means unobtainable fabrics, available to the mainstream populace.



**Lightly mottled wool tabby-** (warp/weft count 7x7 threads/cm) Loosely woven cloth produced to a low sett like this from subtly different hues of warp and weft yarn is probably representative of some of the cheapest qualities of clothing worn in our period.



**Strongly contrasting 2-2 diamond twill-** (warp/weft count 12x11 threads/cm) Finer sett than the previous examples of woollen cloth and woven to a complex and strongly contrasting pattern this may be more representative of a modestly well off person's attire, though is by no means the very best available.