Mary Harlow
is Senior Lecturer at the University of Leicester and Guest Professor at CTR. She works on Roman dress and textiles and would like to see textile production become one of the ‘big themes’ in ancient history.
The main focus of my research is Roman dress. When we imagine the Roman past, one of the images most conjured up is a statue of a man in a toga. Roman authors (always men) wrote about the clothing in ways that expose the social codes associated with certain garments but reveals little about textile production or the relative economic value of either the textiles or the finished garment. If they do talk about cost, it is mostly to complain about women desiring expensive and exotic fabrics such as silk. Alongside this rather partial literature, a huge volume of surviving images in a variety of media show clothed individuals allowing us to stock the Roman wardrobe with a number of different garments. However, it is often hard to match the literature with the images and to align the idealising and stereotyping that they embody to the lived reality of producing and wearing the ancient wardrobe.

Roman dress was essentially very simple: a tunic (or layers of tunics) of very basic rectangular or T-shape, covered with a mantle which could be of varying size and rectangular (the pallium/palla) or elliptical (the toga). The large terminology of Roman clothing suggests that all other garments were a variation on this basic theme. There are lots of words for cloaks, for instance, but the shaping was essentially straight or curved edged and fits into the basic model.

Tunics were sewn along the side seams and made to fit with belts and tucks, and the mantle was wrapped around the body; clothing was not cut to shape but made in single pieces on the loom.

My research takes the quintessential Roman garment, the toga, and asks some more basic questions of it.

These answers come partly from texts – we know the toga was made of wool and that the Romans prized certain breeds of sheep for their fine, white wool. Texts also imply that a Roman could judge the quality of another man’s toga by its colour and wool type. I have made a series of calculations based on

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the toga size as suggested by H.R. Goette extrapolated from his comprehensive study of togate statues. It may be slightly on the large side but it has been shown, when wrapped round the body, to create the effect as in the picture here.

This is a very large piece of cloth measuring approx. 4.20m x 4.80m. To produce it requires the space to set up the loom, time to spin a quantity of fine quality yarn and enough skill to set up the warp, weave a curved edge – and, of course, the time to weave it.

I have calculated, based on experimental work done at the Centre for Textile Research, that such a toga would require about 40km of yarn – which, depending on the skill of the spinner, could take up to 900 hours to spin and then up to nearly 200 hours of weaving for a single spinner/weaver. As it needs a loom at least 5m wide, it is unlikely that a single weaver would be involved (100 hours x 2 weavers). So, all in all, if this is the work of a single Roman matron, production would take about 1000-1200 hours – at 10 hour days that’s 120 days if you do nothing else all day. And these calculations do not include the shearing of the sheep or the preparation of the wool prior to spinning.

This type of thinking about ancient textiles raised all sorts of other issues. Some of these are specific to

Toga, Statue from the Archaeological Museum, Madrid.
I want to talk for a few minutes about the history of textiles and how we need to make it one of the big themes of historical thinking – to sit alongside the stories of big men, big wars and political narratives. In the last few decades, the environment, landscape and climate have all come to the fore in both modern and historical thinking, but still the place of textile production – even in histories of the landscape – gets relatively short shrift.

There are perhaps two basic reasons why textile production is often omitted from large scale studies of the past: one, is that textiles are often perceived simply as clothing (or furnishing) and thus not deemed worthy of ‘serious’ scholarship; the second that cloth production and textile work have traditionally been associated with the domestic world, the realm of women. More recent scholarship has nuanced both these views, but until the late twentieth century, it was social anthropologists and occasionally economic historians who looked closely at textile production and its social and cultural implications. Once ancient historians encountered approaches from anthropology, ethnology and gender studies, they saw first the value of a study of dress and adornment as part of the expression of identity, and secondly recognized

the toga, how often it was worn, how precious a garment it was, if it took so much time to make; did an individual need more than one in a lifetime etc. Perhaps even more importantly, the project raised issues of production: how many sheep might it take to make a single toga? Well, one answer would be – it depends on the size of the toga and the fineness of the weave.

However, the problem raises far more fundamental issues about resources and their use in antiquity. Textile production, despite the absolute importance to the lives of people at all levels of society, has never featured as one of the ‘big themes’ of ancient history.

Those of us who study textile production in the past tend to stick to our disciplines: archaeology, history, iconography, philology (terminology) – some of us study the texts, some look at images, others look at the textile remains and tools – we rarely get time to discuss areas of common interest or overlap – even more rarely do we get to talk to anthropologists or craftspeople – whom we know are essential to our understanding of what we are seeing/reading/finding – but when we do get the chance, as here in Amman this week, the results tend to be rather explosive – traditional assumptions come tumbling down, new ideas develop.
the cultural values of looking closely at modes of production. Interaction with a range of different but cognitively related disciplines has opened up whole new areas of study for antiquity.

The erroneous reading of the gender divide in textile production is perhaps also the reason that it has been historically marginalized. To this I might add, it is noticeable that most people working with textiles, textile production and dress today are women. In the twenty-first century I wouldn’t like to admit that this is also a reason why the subject is easily side-lined, but I suspect the association with the ‘female’ and ‘fashion’ is one of the reasons we still have to fight to be taken seriously. If we can progress our slow move into the mainstream, so basic observations will become part of the common body of knowledge of antiquity - and the present: that people have been covering their bodies with textiles for over 10,000 years; that the production of quite complex weaves preceeded the production of pottery, and certainly of metals. Splicing, spinning, binding, plaiting and weaving were used long before other technologies. The language of spinning and weaving, the sense of meshing systems together to make a whole, of tensions and of design provided a language for early mathematics, for music and for ways of describing the cosmos.

In the west, most people are far removed from the process of textile production and few understand the principles of spinning and weaving, and of those few, a minimal number are academics. In the west the production of textiles has moved from being a fundamental, indeed essential, part of the industrial economy to a predominantly female craft activity. This has a place in the communal economy, but unless perceived as a part of the fashion industry, is considered to have little value. In the very recent past, perhaps as a result of the changing global economies, hand weaving has entered haute couture fashion. This brings it into the public domain as a high-end product, where again, little thought is given to the labour and skill involved in its production.

As the west has outsourced its industrial textile production, so other economies have benefitted. In both China and India and in developing nations, textile production is exploited as a means of growing the economy. In some areas, particularly in India and also in Jordan, textile craft is also exploited as a means of creating a local economic base for communities; sustainable production and corporate social responsibility are becoming themes which shape the new textile consumer literacy (see UNESCO’s Intangible Cultural Heritage initiative: cf. http://www.unesco.org/cul-
The concept of the ‘fibre revolution’ as expressed by Elizabeth Barber and Joy McCorriston considered among other matters, how the very early production of fibres into spun thread influenced gender roles, the division of space both in dwellings and communities and the evolution of specialized crafts. We now need cross period work to recognize the progress and amplification of this revolution throughout history as increasingly complex societies required more and more textiles. The Roman army, for instance, was a mass consumer of textiles, not all of which can be accounted for in domestic production. Building a fleet required long term planning as woven sails required large amounts of raw material and time to produce. The raw materials needed to be bred, pastured, shorn or grown, harvested, and processed before they reached the spinners. Textile production for both domestic and wider needs demanded time and planning. The effort of production competed in both time and land use with edible crops, and would have created a distinct pattern in the landscape. The environment, too, would have been affected by land use and processes. Retting flax can affect the potential for fresh water supply; transhumance create a particular pattern of land use and social behavior. Without the need for textile production ancient physical and cultural landscape would have had a very different shape. Studies of communities where traditional, non-industrialized textile production is still in place, together with early ethnographic studies of European village behaviour has provided approaches by which we might access production processes and their social implications in antiquity. Even the predominantly male voices of ancient literature make it clear that an often implicit understanding of textile production, particularly of spinning and weaving was very much part of the common body of knowledge in the general population of antiquity. In everyday life men, women and children (free and slave, rich or poor) were either actively engaged in, or close observers of these activities. Textiles were ubiquitous, as clothing, soft furnishings, saddles, bags, nets, sails - and even shelter.

This ubiquity is witnessed by the often unnoticed use of textile and clothing language as both narrative tool, description and metaphor in classical texts. In every form of literature, from love poetry to epic, forensic speeches to satire, from tragedy to comedy, references to the production of textiles to
articles of clothing abound. The Fates spin the thread of life; time passes as Penelope weaves and unweaves her tapestry while she awaits the return of her husband; the cosmos is a woven fabric; songs and plots are woven; garments tell stories; clothing symbolizes character; we count in a binary system that recalls the relationship of warp and weft: textile terminology is everywhere, once one starts to recognize it.

These examples demonstrate that textile craft was very visible in the past, it has only slowly become invisible. Industrialization removed textile work from the craftsperson to the factory, often reducing the element of individual skill. This close association between methods of production and finished article is something modern society has lost sight of when it comes to clothing and textiles. From an academic perspective, a major drawback of the loss of craft knowledge is that we lack an understanding of technical language and knowledge, and thus often miss an essential part of the information.

One way to solve these issues is to look where traditional techniques are still in play – we are not suggesting that direct analogy is a good or acceptable methodology but we can learn much about the stories behind the textiles – we might learn that men and women are sometimes associated with different types of looms, for instance, that local sheep are not the preferred raw material and that high quality goods use imported wool – these are all questions which need answers and looking at the practice of traditional craft should speak to our imaginations as historians. Traditional techniques might enlighten our understanding of the implicit assumptions in the writings of ancient societies and techniques might give us insight into what we find in the archaeological record.

The discipline of experimental archaeology has made an equally significant contribution to research in this area. It is now possible through many tests and experiences to gain a deeper understanding of how textiles were made and to answer such questions as: how long might it take to make a garment; what level of skill was required; what quality of raw material used; and what resources and techniques were required. Furthermore, archaeologists working together with experienced craftspeople have produced reproductions which have given new insights into how textiles were made and how they might have been used. This allows us to ask how long a garment could last, how often it needed mending and where wear or degradation is first visible. Good knowledge of archaeological
textiles has clarified terms and techniques, although the persistence of misunderstandings remain strong given the frequent lack of inter- or cross-disciplinary knowledge. For instance, it is now accepted by most people ‘in the know’ that embroidery as a decorative technique is a relatively late development: Greek and Roman weavers wove their patterns in, they did not embellish finished textiles with needle and thread. Despite this, the term embroidery is often found in descriptions of ancient patterned clothing. Colour is also an element which is fast becoming a major interest among those who study ancient dress. Archaeological textiles have revealed a wide range of coloured garments; papyri dye recipes and even previously thought of as pure white marble statues of antiquity are now being shown to have been extensively and skillfully painted. Also, we might add the production of dye plants and minerals to our image of the ancient landscapes.

Ancient clothing is often talked about in terms of ‘drapery’ and it is the relationship of the type of textile and its properties combined with the techniques of its construction that create drape. Most clothing in antiquity was made-to-shape on the loom. This means that even before the raw material was spun, the type of garment had been decided. This creates a novel dynamic between all those involved in the chaîne opératoire. Was a thick, felted garment required, or a light, loose woven one? This dynamic is not one that we in the west are au fait with unless we make our own clothing. For the most part, we simply shop and buy what others have deemed fashionable this season. Even the concept of draped clothing has an element of the exotic and foreign to us.

To understand the past, and its relationship to our varied presents, requires an open approach to interdisciplinarity. It is essential, to work and learn from craftspeople, archaeologists, anthropologists, economists, artists – and endless other ‘–ists’, and it must become central to further research – as proved, so effectively by our gathering in Amman.

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**Bibliography**


See also the research project The Textile Revolution: http://www.topoi.org/group/a-4/
