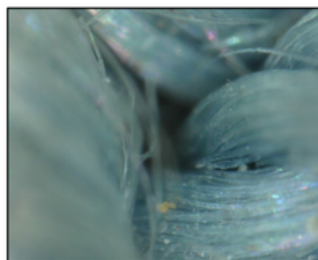




**ART BIO  
MATTERS**

## **Silk, stains and science of a knitted waistcoat: The lab is a foreign country but do they do things differently there?**

Jane Malcolm-Davies, Beatrice Behlen & Paula Nabais



A rare men's undergarment, knitted of fine silk, has been at the Museum of London since 1924. It is said to have been worn by King Charles I at his execution in 1649. The waistcoat has been described as "ghastly" in part owing to its associations with the king's beheading but also because of the stains on its front. Several attempts have been made to analyse these stains, but these have proved inconclusive.

A new research project has now focused on the garment itself. A curator, a knitting historian, and a textile conservator secured permission for sampling and made connections with scientists who could help reveal more about the object's material and manufacture.

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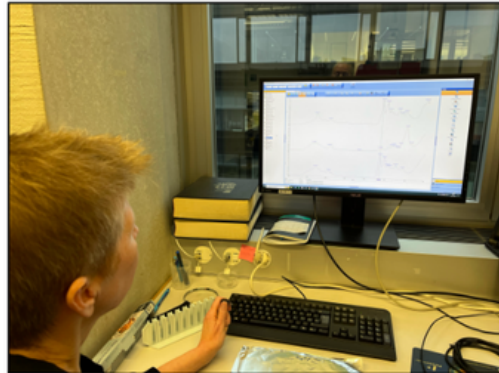
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The curator and the historian took the samples to a radiocarbon dating facility and a dye analysis laboratory. These were intellectual as well as physical journeys to other countries. In both places, there were machines connected to processes with hard-to-remember acronyms and names – EDXRF, FTIR, FORS, SERS, fluorimetry, graphitisation. Seeing the equipment and how the samples were treated was revelatory and despite preparatory reading and some prior experience with the scientific analysis of textiles, there were surprises.

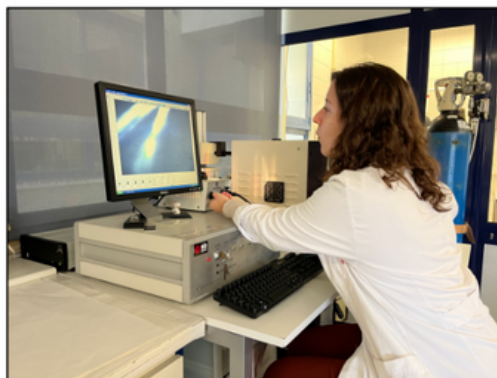
Not least, the processes appeared less “scientific” than expected. There was inspection by eye; seemingly subjective judgements were made about the material and which parts of the samples to use and/or how to treat them. The specialists behaved more like craftspeople than scientists. There seemed to be many grey areas in the colour laboratory. These were familiar behaviours and recognisable territories for the curator and the historian. But the results were not straightforward and there was yet more wayfinding to be done.



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The intersection of innovative science, culture, and history, it seems, is not very well signposted.

This paper will explore the challenges and discomforts experienced by dress historians when venturing away from the familiar methods of interrogating and analysing objects. It will also consider the difficulties of identifying which analytical methods to use, with whom to collaborate, and how to interpret unexpected results. It aims to find common ground between the culture of the museum and the culture of the laboratory.

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