

Is it time for more testing?

A warm welcome to the Summer 2023 edition of the BSTS Newsletter. I'm delighted that the articles in this edition cover a variety of different Shroud-related topics, including history, science and medieval art, reflecting some of the diverse fields of study which have revealed so much about the Shroud's provenance and extraordinary characteristics.

In January this year we received the sad news of the passing of Larry Schwalbe. Larry was a physicist from Los Alamos National Laboratories and a member of the team of scientists involved in the Shroud of Turin Research Project (STURP) which examined the Shroud in 1978. He continued to apply his considerable expertise to scientific research of the Shroud in the years that followed and even made time during his final days to co-author a paper on the Shroud for the *International Journal of Archaeology*. The field of Shroud science will certainly miss his knowledge and experience, as well as his warm and generous nature.

Larry's passing is a reminder that nearly forty-five years have now elapsed since the STURP examination, which remains the only in-depth scientific study of the Shroud that has ever been undertaken. During the years since that examination, scientists have continued to scrutinise the samples of material, photographs and data collected by the STURP team and this ongoing work has revealed new evidence which has enhanced our understanding. However, in spite of these efforts, science cannot yet provide conclusive answers to many important questions concerning the Shroud and this is unlikely to change until the relevant authorities give permission for another comprehensive scientific examination. Scientists today would of course be able to utilise the very latest instruments and techniques, with capabilities that far exceed those available to the STURP team forty-five years ago. There can be little doubt that the information that could be obtained from such an examination would turbo-charge scientific research into the Shroud and help to close many of the gaps in our understanding of this remarkable cloth and its enigmatic image.

In the previous edition of the BSTS Newsletter, Ian Wilson's article *Thinking outside the Square* included a description of 'Operation Night Watch', a project recently undertaken by scientists at the Rijksmuseum in Amsterdam. The aim of that project was to obtain a comprehensive scientific analysis of one of the world's most famous paintings, Rembrandt's masterpiece, *The Night Watch*, using techniques which would not damage, degrade or discolour their precious painting. As Ian pointed out, this project is an example of the type of approach which could be successfully applied to a future examination of the Shroud.

During a visit to Amsterdam earlier this year, I had the privilege of spending time with Professor Katrien Keune, the museum's Head of Science, and I learned a great deal about the 'Operation Night Watch' project during our three hour meeting. This project began

in the summer of 2019 and their primary goal was to make a comprehensive study of the condition and painting technique used for this large artwork. A key feature of the project was the use of computer controlled, robot operated cameras and scanners which were used to systematically capture photographic and spectroscopic details of every millimetre of the painting's surface. These details were then 'stitched' back together and analysed with the aid of advanced imaging and artificial intelligence.

A variety of different imaging techniques were used for their study, including natural light and ultraviolet photography, macro X-ray fluorescence, reflectance imaging spectroscopy, optical coherence tomography and 3-D scanning. In total, these techniques captured an astonishing 51 terabytes of scientific data which will continue to support scientific research into this Rembrandt painting for many years to come. For comparison, if the STURP team had been able to capture this amount of data and store it using the computer technology available in 1978, they would have returned to the USA with a 150-mile-high stack of floppy discs!

Clearly there are significant differences between a 17th painting by a Dutch Master and an ancient linen cloth containing markings that, as STURP discovered, are not the result of pigments, paints, dyes or stains. It's therefore not surprising that some of the techniques that were used in this examination of a Rembrandt masterpiece would not be suitable for a study of the Shroud. For example, optical coherence tomography was used to identify the layers of paint and varnish found in the artwork and 3-D scanning showed where Rembrandt deliberately created height differences in the paint. These technologies certainly gave the research team a valuable insight into Rembrandt's painting technique but they would be unlikely to reveal any useful information if they were applied to the Shroud. However, the computer-controlled, systematic approach adopted by the Rijksmuseum for gathering this data, in conjunction with a more pertinent selection of imaging and spectroscopic techniques, is a model which could be adopted for any future examination of the Shroud.

Raising Awareness

One of the aims of the BSTS is to raise awareness of the Shroud and so it's always heartening to hear about members who are engaged in activities which further this goal. So far this year, Pam and Phil Moon have taken their mobile Shroud exhibition to several locations throughout the UK including London, Clitheroe and Wells. Later this month the church of St. Peter and St Paul in Wolverhampton will host the exhibition for 10 days and I'm delighted to report that whilst writing this editorial, we received news that the Minster in my home town of Halifax has agreed to host the exhibition during the autumn. According to tradition, the name Halifax is derived from the Old English *Halez Fax*, meaning 'Holy Face', so it's certainly an appropriate venue.

Several members have also given presentations on the Shroud in various parts of the UK during the past months. Pam Moon usually delivers talks at each of the mobile

exhibition venues, with Juliet Faith also giving several presentations at Wells Cathedral during the 5 weeks that the exhibition was based there. Shroud presentations have also been given in Edinburgh and Coatbridge by Henry Creechan, in Staffordshire by Brenda and Stuart Benton, in Wales by Luigi Antoniazzi and in Wooler, Northumberland by Anthony Robb. I must also give a special mention to Mike and Pam Pietrzyk from Virginia, USA who found time during their 3 week trip to the UK to give talks on the Shroud to audiences in Wales, Scotland and Northern Ireland.

Others prefer to engage with an audience using digital media and BSTS members Guy Powell, Mike Creavey and Dale Glover each have their own series of podcasts devoted to the Shroud which regularly include interviews with some of the most widely known and respected Shroud scholars (see YouTube links below). Guy has taken his involvement even further with his recently released book *The Only Witness: A History of the Shroud of Turin* and must be warmly congratulated for his book having achieved a number one Best Seller Status on Amazon. And of course David Rolfe's 2022 film *Who Can He Be?* continues to attract viewers from around the globe.

Thanks to the efforts of all the above, plus many more around the world who openly share their passion for the Shroud, there are many people who were previously unaware of its existence who have become captivated by this remarkable cloth, including some who have recently subscribed to this newsletter. Let's hope that through all these activities, a new generation of talented scholars will feel inspired to continue the work of those, like Larry Schwalbe, who have contributed so much to our current knowledge of the Shroud.

Michael Kowalski
June 2023

Podcast links:

Guy Powell - <https://www.youtube.com/@Guy.R.Powell.ShroudofTurin/videos>

Mike Creavey - <https://www.youtube.com/@TheGraciousGuest/videos>

Dale Glover - <https://www.youtube.com/@RealSeekers/videos>

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