

Conservation of a 17th Century Baroque Oil Painting as a Collaborative Research and Instructional Tool

Kristen Watts¹, Emily Wroczyński², Maggie Bearden², Amanda Norbutus¹, Kristin de Ghetaldi³, Anthony Lagalante¹



1. Department of Chemistry, Villanova University
2. Winterthur/University of Delaware Program in Art Conservation
3. Ph.D. Program in Preservation Studies, University of Delaware

Abstract

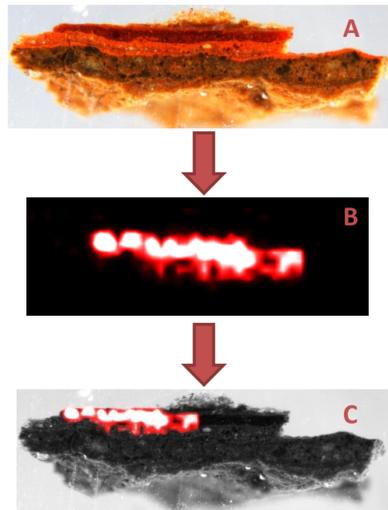
The opportunity to conduct *in situ* analysis in tandem with ongoing conservation efforts does not frequently present itself, especially in conjunction with educational outreach. *The Presentation of David to King Saul after Slaying Goliath* (12'×19', oil on canvas), is a 17th century oil painting attributed to Baroque master Pietro da Cortona. A two-year campaign to restore the painting began last September at Villanova University providing an opportunity to educate students and the surrounding community to the field of art conservation. The interdisciplinary team is presently composed of conservators, interns/volunteers, and members of the Villanova University Chemistry and Art History departments. The conservation effort has been performed in a publically accessible space where students at Villanova University are able to study and observe the conservation team as they work on the painting. Members of the Villanova Chemistry Department specializing in preservation science and analytical chemistry are conducting research (using pXRF, SEM-EDX, DESI-MS, etc.) on the artist's original materials. Concurrently, Art Historians at Villanova University are investigating the provenance and history of the painting. All team members continue to contribute to the project's blog site using a variety of social media to engage the public and promote awareness about the painting. Regularly scheduled tours of the painting are given during treatment hours, while computer monitors and didactic panels provide information to visitors during off-work hours. This painting continues to be utilized in many classes on Villanova's campus, providing an opportunity for liberal arts students to experience both interdisciplinary studies in a non-traditional way.

The Space



The conservation effort is being conducted in a publically accessible space, as seen in the picture on the left. University students and the general public are welcome to visit, observe, and ask questions at any time. There is also a 24-hour live video feed from the camera shown in the picture to the right so that the conservation of the painting can be followed in real-time. Necessary health and safety precautions are taken when noxious solvents are occasionally involved in the treatment (e.g. fume extraction unit, respirators, etc.).

Chemistry

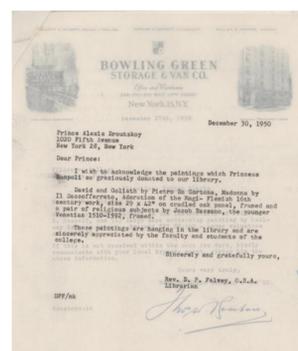


Graduate student research in the Chemistry Department under the direction of Dr. Anthony Lagalante has used *The Triumph of David* toward developing a new binding material imaging method using DESI-MS. Figure A depicts a cross-section in visible microscopy from the painting, Figure B is the isobaric image at 187 *m/z* (corresponding to azelaic acid) obtained from DESI-MS and Figure C is a false color overlay to show the localization of the binding media within the cross section.

Art History



Several art history classes at Villanova have benefitted from the on-going conservation campaign. Shown in the top left is Dr. Timothy McCall, an Associate Professor of Art History at Villanova University, with his Renaissance Art History class. Studio art classes from Haverford University, shown in the middle, have also used the painting for their studio sketch work. Finally, art history undergraduate/ graduate student research at Villanova University has provided remarkable insight into the oeuvre of Pietro da Cortona, the dramatic history of the painting's immigration to the United States, and the circumstances of its donation to Villanova University by Princess Ruspoli and her daughter.

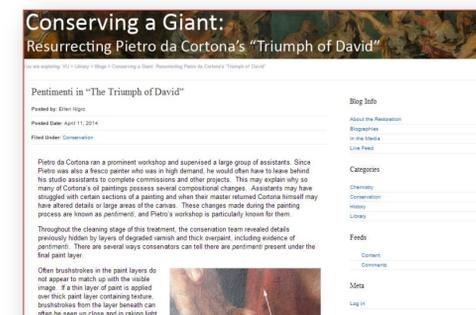


Conservation and Public Outreach



The conservation team continues to remove degraded varnish and overpaint, paint consolidation, and aesthetic compensation in a public setting. The project has been visited by WUDPAC undergraduate and graduate art conservation classes and has provided internship opportunities for pre-program and current conservation graduate students. In the top left corner, head conservator Kristin de Ghetaldi is demonstrating the use of solvent gels in the removal of overpaint. To the right, Maggie Bearden (top) and Emily Wroczyński (bottom, shown with conservator Richard Wolbers) assist in the cleaning of the painting. The bottom image shows a detail of the painting before (left) and after (right) removal of the discolored and degraded varnish.

Conservation Advocacy



The conservation project has been promoted to the public in several different ways. Primarily, visitors from the public have learned of the restoration from reading web-articles, such as the one published on *The Philadelphia Inquirer's* website, or hearing about it on WHY's radio program "The Pulse". A biweekly blog is also used to update the public on recent findings, rotating between science, conservation, and art history. Follow us at: <http://projects.library.villanova.edu/paintingrestoration/>