Praxis Fall 2016 Independent Study: Understanding CONSERVATION SCIENCE & ART CONSERVATION

Intern:
Lizhu Duanmu
BMC’17
lduanmu@brynmawr.edu

Faculty Advisor:
Marianne Weldon
Objects Conservator, Collections Manager
Special Collections, Bryn Mawr College
mweldon@brynmawr.edu

Fieldwork Supervisor:
Kate Duffy
Conservation Scientist
The Philadelphia Museum of Art
Kate.Duffy@philamuseum.org

Art Conservation: Preserving Cultural Properties

ART CONSERVATION focuses on the protection of tangible cultural heritage. Conservation treatments are done to preserve the object’s physical integrity, its aesthetics and cultural significance. Conservation activities include examination, preservation and conservation-restoration. SCIENCE serves as the basis for the proper preservation and treatment, providing analytical information on materials, conditions, and past treatments. Through this Praxis course, I want to understand the art conservation field in general, and what information conservation science provides in relation to the objects being studied.

Taking A Glimpse into the Field: Site Visit to Art Conservation Institutions

In the art conservation field, there is increased sharing of information between the East and the West. In my visit to the laboratories at the Conservation Center for Art and Historic Artifacts, I was surprised that Japanese tools were used in western paper conservation. A second tour to the Nishio Conservation Center revealed how treatments on Japanese artworks were implemented with both traditional and modern tools and materials.

Conservation Science: Scientific Laboratory at PMA

The mission of the laboratory is to support the museum by performing scientific analysis on cultural heritage objects in the Museum’s collection. There are two conservation scientists and five analytical instruments in the lab. For my projects, I was introduced to Pyrolysis-Gas Chromatography/Mass Spectrometry (Py-GCMS). For Py-GCMS, a 20-40 microgram-size sample is removed from the object. The instrument breaks larger organic molecules into smaller compounds indicative of the original molecules of the sample.

Featured Project: Renaissance Chiaroscuro Woodblock Prints

For the chiaroscuro woodcuts, Py-GCMS was used to determine the organic binding materials used for printing ink, which, according to literary sources, consisted of a colorant and a vehicle such as linseed oil. Py-GCMS identified the binding medium as a mixture of drying oil and pine resin. The addition of pine resin increases the viscosity of the oil, allowing the ink to better adhere to the woodblocks during the printing process.

Reflection: Science & Conservation & Art History

From this Praxis course, I gained an understanding of the field of art conservation, and fully engaged in technical analysis at the laboratory in an art institution. From this internship at the PMA, I found that flexibility is important. I was expected to take on various duties and complete different tasks including: data entry, inventory, filing, research, and data analysis. This project was also a great opportunity to integrate my knowledge of art history with my lab research, introducing a different perspective to look at art objects – through the lens of science.