

Leonardo from London to New York

Two Conferences on Recent Technical and Historical Discoveries

Leonardo da Vinci was in the news often this past year—there was the newly uncovered, contemporary copy of the *Mona Lisa*, the highly anticipated exhibition ‘Leonardo da Vinci: Painter at the Court of Milan’ at the National Gallery, London, and the recent discovery of the *Salvator Mundi*. In light of these additions to Leonardo’s oeuvre, and on the occasion of this momentous exhibition at the National Gallery, London, two conferences dedicated to Leonardo’s technical practice were held in London and New York this winter: “Leonardo da Vinci’s Technical Practice: Paintings, Drawings and Influence,” January 13-14, 2011, at National Gallery, London and “Leonardo da Vinci: Recent Technical Findings and Discoveries,” February 18, 2012, in New York.

As two students studying paintings conservation at the Institute, we were fortunate to attend both conferences. At the time of the London conference we were already in Florence at NYU’s Villa La Pietra participating in a collaborative research project with six other conservation and art history students headed by Conservation Center Chairman Michele Marincola ‘90 and IFA Director Patricia Rubin.

The London conference at the National Gallery was orchestrated by CHARISMA (Cultural Heritage Advanced Research Infrastructures: Synergy for a Multidisciplinary Approach to Conservation/Restoration) and brought together art historians, conservators and scientists from all around the globe. Speakers shared recent research and findings involving the application of new and existing techniques of examination and analysis to works by Leonardo and his followers, such as *The Madonna of the Carnation*, *La Belle Ferronnière*, the Prado copy of the *Mona Lisa*, the *Salvator Mundi*, the Paris *Virgin of the Rocks*, and the *Adoration of the Magi*. Technical presentations on both paintings and drawings were accompanied by art historical investigations into Leonardo’s workshop practice and his widespread influence.

Of particular appeal to us was the presentation by Roberto Bellucci of the Opificio delle Pietre Dure on the Uffizi’s *Adoration of the Magi*. The ambitious composition was left unfinished at an early stage, with only the underdrawing and parts of the under-paint layers complete, providing opportunity for insight into the preparatory phases of Leonardo’s painting methods. The Opificio has initiated a thorough examination of the painting’s condition and Bellucci presented their preliminary findings, including the use of false color UV and multispectral NIR to identify areas of the painting that had been previously cleaned. Upon returning to Florence we were able to tour the world-renowned conservation laboratories of the Opificio and see the *Adoration of the Magi* in person. This allowed us to fully appreciate the sophisticated examination setup in the labs while affording us the rare opportunity to see such a painting in close proximity.

The conference proved an ideal format to discuss the similarities between findings, make connections, and evaluate the current understanding of the complexity and innovation of Leonardo’s technique. For example, as graduate students of a joint art history and conservation program, it was interesting to see the manner in which Leonardo recycled cartoons in his various compositions and the number of instances of ‘finger wiping’ in the early stages of his painting, a method of using one’s fingers to blend and work the ground and paint layers.

The following month, the conversation was continued in New York. This time, the focus narrowed to two paintings: the *Salvator Mundi* and the National Gallery of London’s *Virgin of the Rocks*. The London *Virgin of the Rocks* is a complex work to study, due to confusing condition issues and an incomplete understanding of the commission, specifically in how it relates to the Paris version. Larry Keith, paintings conservator at the National Gallery London and 2012 Kress Lecturer discussed the

recent treatment of the painting.

Much of Leonardo's delicate and varied brushwork and subtle color relationships were revealed with Keith's thinning of the heavily discolored and degraded varnish, as presented in an impressive time-lapsed video of the cleaning. The National Gallery team addressed the unusual drying cracks in the paint through new analytical methods. Gas-chromatography linked to mass spectroscopy (GC-MS) analysis identified the use of walnut and heat-bodied linseed oil in the paint layers. The differential drying times of the two oil media offer an explanation for this distinctive craquelure pattern often seen on paintings by the master. Keith also discussed the deterioration in passages containing red lake, such as the Virgin's tunic. Fourier Transform Infrared Spectroscopy (FTIR) revealed that starch had been added to the red lakes, as recommended by contemporary artist recipes, likely as an extender. The thinning of the varnish layer made visible a band of a lighter blue in the sky at the edge of the panel. In sections that would have originally been covered by the frame, the deep blue of the sky abruptly changes to a lighter green-blue color. It appears as though a layer of ultramarine was applied rather crudely after the painting was installed in its final frame, likely as a final layer or alteration.

The focus of the conference then shifted to various lines of inquiry into the *Salvator Mundi*. To begin, Robert Simon, art historian and art dealer, presented research on the numerous versions of the painting and the surprisingly widespread dissemination of Leonardo's composition. Comparing the re-discovered *Salvator Mundi* to the larger corpus highlighted the quality of the painting and originality of the composition, which other artists attempted to emulate. The best extant example is now in the collection of the Detroit Institute

of Art. Simon hypothesized the author of this work to be Francesco Melzi, assistant and pupil to Leonardo. Simon's important research revealed the richness and complexity of artistic influence and creativity fostered by this painting.

Nica Gutman Rieppi, Associate Conservator for the Samuel H. Kress Program in Paintings Conservation, then spoke in some detail about the technical analysis of the painting. The findings were in keeping with the results from other Leonardo paintings as presented in the London conference. It was found that in the *Salvator Mundi*, Leonardo prepared the walnut panel with a ground of lead white in oil. Similar preparations were also noted in *La Belle Ferronnière* and the *Lady with an Ermine*. The ground also contained particles of soda-lime glass. It was explained that glass was a common additive to paintings of the 15th and 16th centuries, both for its drying properties and its ability to impart translucency to the paint layer. For an example, glass was found in the black background, where multiple, thin translucent layers were used to create a deep and rich setting for Christ.

Finally, Dianne Modestini, Conservator for the Samuel H. Kress Program in Paintings Conservation, discussed the details of her treatment and research of the *Salvator Mundi*. The extensive time Dianne spent working with this painting allowed her to develop intimate knowledge of the paint surface and Leonardo's creative methods. Astonishing details such as the depiction of individual inclusions in the crystal orb and the intricate knotwork on Christ's robe were particularly illuminating. Interestingly, Dianne found that the inclusions and this specific knotwork pattern are depicted in an early drawing by Leonardo in the Royal Library at Windsor.

It was a great privilege to

be able to attend both of these conferences. The London meeting was a wonderful platform for the gathering of such diverse international Leonardo scholars, enabling a valuable exchange of ideas and current research. Complementary to this rare occasion, the conference in New York honed in on two paintings, allowing the speakers to delve further into their findings and insights. Leonardo and his works have long held an irresistible allure due to both the beauty and power of his art and the mystery that envelops it. Witnessing the presentation of so many new findings on perhaps the most-studied artist to date demonstrated that the innovative use of new technologies has great potential. Through such innovation and international collaboration the conservators and art historians at these two conferences have taken great strides in shedding light on the elusive creative practice of this master. *

– Sophie Scully and Caitlin Breare

Sophie is a third-year paintings student and Caitlin is a second-year paintings student



Dianne Modestini, Margaret Holben Ellis '79, Caitlin Breare and Sophie Scully outside the National Gallery, London

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Giuliano Bugiardini

From Florence to Bologna: examination and treatment of Giuliano Bugiardini's *Madonna and Child with Saint John the Baptist*.

photo credit: Caitlin Breare, Michele Marincola