



The migration of a painting

A recreation of Raphael's *Lo Spasimo* returns to Palermo as a panel painting and is installed into its original frame

On 9th July, Factum Foundation's recreation of Raphael's *Christ Falls on the Route to Cavalry*, nicknamed *Lo Spasimo di Sicilia*, was installed in the monastery of Santa Maria dello Spasimo in Palermo, where the painting hung until the middle of the 16th century.

The original painting by Raphael, now in the Museo del Prado in Madrid, was transferred from a wooden panel onto a canvas after being taken to Paris by Napoleon, during the Spanish War of Independence. Factum Foundation addressed this fact with the recreation of the painting on a rigid panel, in order to install it into its original frame in its original location in Palermo.

The return of *Lo Spasimo* to Palermo coincides with the 500th anniversary of Raphael's death. It also coincides with a series of high-resolution recording, facsimile and recreation projects by Factum Foundation, as well as several exhibitions and a publication about the role of new technologies for the preservation, sharing and understanding of cultural heritage.



The recreation was printed in sections so as to get as close as possible to the configuration of the original panel



***Lo Spasimo* highlights the fact that artworks have complex biographies involving movements, transformations and alterations**

Painted around 1517 by Raphael and his studio in Rome, *Lo Spasimo* was shipwrecked on its way to Sicily in 1520. The painting survived and washed up near the coast of Genoa, thus conferring to it a miraculous dimension. With a papal intercession, the painting eventually arrived in Palermo and was installed in its elaborate frame in the church of Santa Maria dello Spasimo. Later, in 1661, the painting was acquired by Philip IV of Spain, where it hung for a time on the main altarpieces of the chapel at the Alcázar in Madrid. The church of Santa Maria dello Spasimo burnt to the ground shortly after the painting's departure, a disastrous fate shared by the Alcázar in 1737. But once again, *Lo Spasimo* survived, one of the few artworks untouched by the Alcázar fire. The painting remained in Spain until 1813, when it was taken to Paris during the Spanish War of Independence, and then returned to the Spanish Royal Collection in 1819 and thereafter hung in the Museo del Prado. Transferred from its wooden panel onto a canvas during its time in France, the painting, its history and now its recreation, reveal many aspects of its biography. It emerges as a great painting subject to historical changes, journeys and miraculous narratives. As material evidence, the painting also allows us to think about Renaissance studio practice, Raphael's working methods, the many hands involved in its production and the role and function of copies in a digital age.

...As it was being borne by sea to Palermo, a great tempest cast the ship upon a rock, and it was broken to pieces, and the crew lost, and all the cargo, except this picture, which was carried in its case by the sea to Genoa. Here being drawn to shore, it was seen to be a thing divine, and was taken care of, being found uninjured, even the winds and waves in their fury respecting the beauty of such a work.

Giorgio Vasari, *Lives of the Most Excellent Painters, Sculptors, and Architects*, 1568



Gabriel Scarpa recording Raphael's *Lo Spasimo* at the Museo del Prado using panoramic photography © Factum Foundation



The recreation of Raphael's *Lo Spasimo* on a wooden panel

The process of recreating *Lo Spasimo* started with the recording of the colour of the original painting in collaboration with the Museo del Prado, employing high-resolution panoramic photography to capture the colour of the painting in the gallery hall. As with any project carried out by Factum Foundation, the masterpiece was recorded at the highest possible resolution using entirely non-contact methods, in line with the ongoing commitment to the preservation of works of art. This was done following a set procedure to ensure that colour data is objectively accurate and without any undocumented modifications. Factum Foundation's working methods meet the highest standards in terms of both digital input and output.

The data was processed in Madrid, resulting in hundreds of high-resolution photographs that were colour-corrected and printed with Factum's flatbed printer. The wooden panel was created in inert polyurethane using infra-red imaging provided by the Prado. The colour surface and the rigid structure were fabricated in parallel and merged by Factum's craftsmen in Madrid.

With the Museo del Prado's infra-red spectrograph image (taken in 2009), it became possible to appreciate the configuration of the painting's wooden panel. A series of three roughly parallel lines cross the painting from top to bottom, suggesting that the panel was formed of four sections with varying widths. The interpretation of the IR image was used as a reference to re-create the panel. Conversations with the Prado's conservators and an analysis of how oil-painted wooden panels from the period behave guided decision making during the production: the original panel would not only have comprised the four sections indicated by the IR image but also a convex surface.

Based on the available information, a 3D digital model of the panel was produced and then materialised through CNC milling, using medium density polyurethane boards that were then fixed to an Alucore panel for stability.

The role of new technology for the preservation of cultural heritage

Increasingly recreations and facsimiles are being used as a new way to share, reunite and understand culture. The work carried out by Factum Arte on Veronese's *Wedding at Cana* is a good example of this. A facsimile of Veronese's great painting in the Louvre was installed into its original location in Palladio's refectory on the Island of San Giorgio Maggiore, Venice, now the home of the Fondazione Giorgio Cini. The recording, recreation and installation of Raphael's *Christ Falls on the Route to Cavalry* in the monastery of Santa Maria dello Spasimo links Raphael's work and its biography with the city of Palermo.

All work to record and make the facsimile was done by Factum Foundation in collaboration with Peter Glidewell.

We would like to thank for their support and collaboration:

Bernardo Tortorici Montaperto - Presidente Amici dei Musei Siciliani

Miguel Zugaza, former director of the Museo del Prado who granted Factum Foundation permission to undertake the project. Enrique Quintana, José de la Fuente and Cristina Aloviseti provided knowledge and assistance throughout the recording.

Vittorio Sgarbi, Daniela Storti, Valeria Merlini, Matteo Lafranconi and others provided valuable support.



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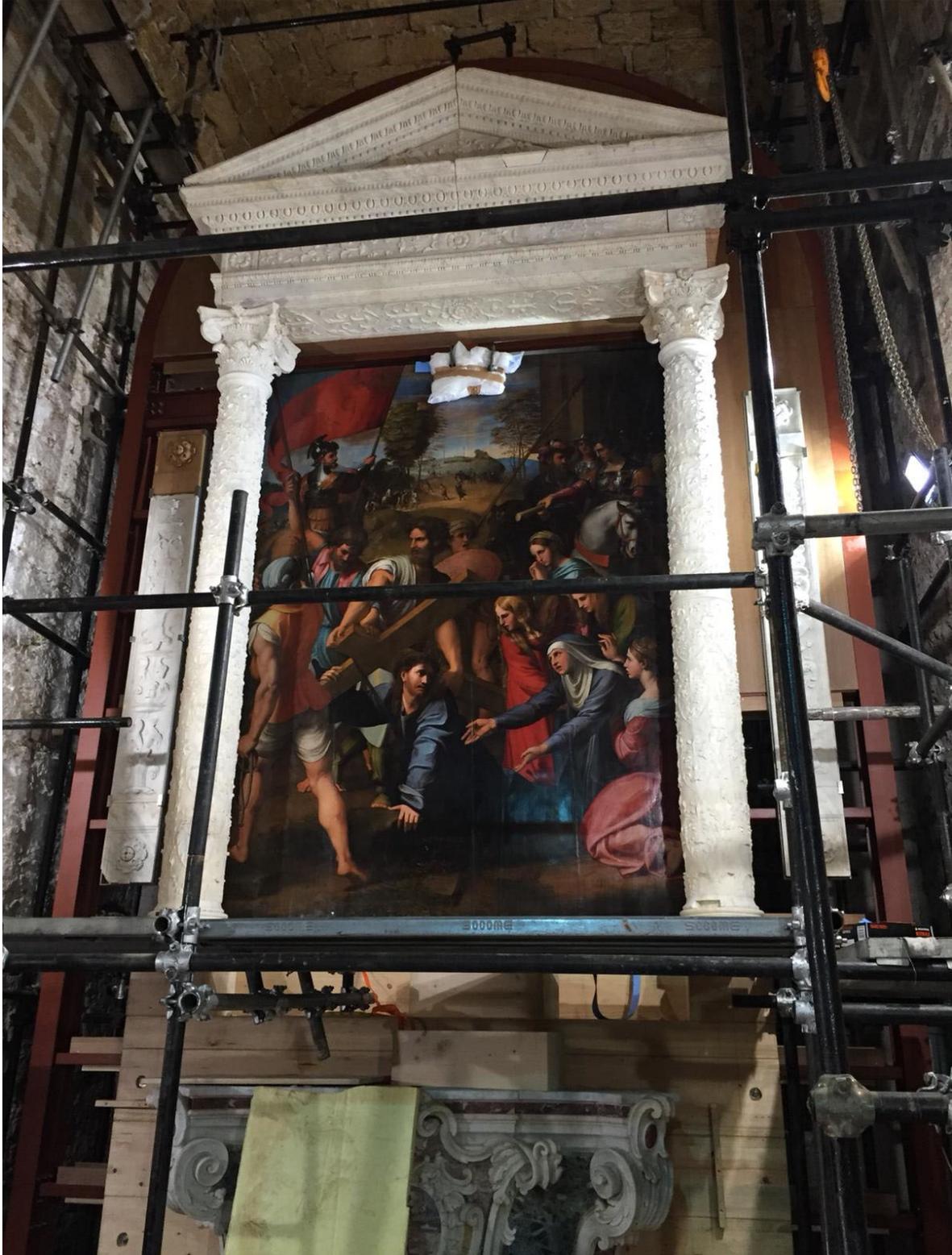
Several print tests are made to achieve the most accurate color, using the Museo del Prado's infra-red spectrograph image

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Provisional image: the recreation of Raphael's *Lo Spasimo* installed in the monastery of Santa Maria dello Spasimo
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Factum Foundation's ongoing projects in Palermo

The recreation of the lost map of al-Idrisi for Palermo

The map of the world made by the 12th-century Islamic cartographer al-Idrisi for Roger II of Sicily was a masterpiece of mapping which remained the most technically sophisticated world-map for three centuries after its production. Drawing on several centuries of Islamic cartographic knowledge and classical sources, al-Idrisi produced both a book of 70 maps covering the surface of the known world, and a single, round map engraved onto a silver disk and set into a wooden table, with Mecca at its centre.

The silver disk is now lost, and the *Tabula Rogeriana*, also known as *Entertainment for those wanting to discover the world*, survives only through later copies. In a groundbreaking project, Factum Foundation has undertaken to re-create al-Idrisi's fabled map in conjunction with the Bodleian Library and the cartographic historian Jerry Brotton. Neither facsimile nor copy, this re-creation nonetheless combines painstaking historical research with advanced digital techniques and the highest levels of craftsmanship, paying tribute to the lost original and offering yet another layer to add to the complexity of its transmission.

Factum Foundation's intention is that this recreation of the great silver map of Roger II will find its way back to Palermo, the home of the cartographic academy led by al-Idrisi.



Background: a test for the facsimile of Tutankhamun's tomb; the recreation of Raphael's *Christ Falling on the Way to Calvary* (now in the Museo del Prado) painted for the church of Santa Maria dello Spasimo, Palermo and installed on 9th July 2020; and an altar made by Factum Arte from a print by Piranesi published in 'Vasi, candelabri, cippi, sarcofagi, tripodi, lucerne, ed



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ornamenti antichi disegnati ed incisi dal Cav. Gio. Batt. Piranesi' (Rome, 1778). / Foreground: the re-creation of the lost silver map by al-Idrisi, made for Roger II of Sicily but lost in a shipwreck in the 12th century

© Oak Taylor Smith for Factum Foundation

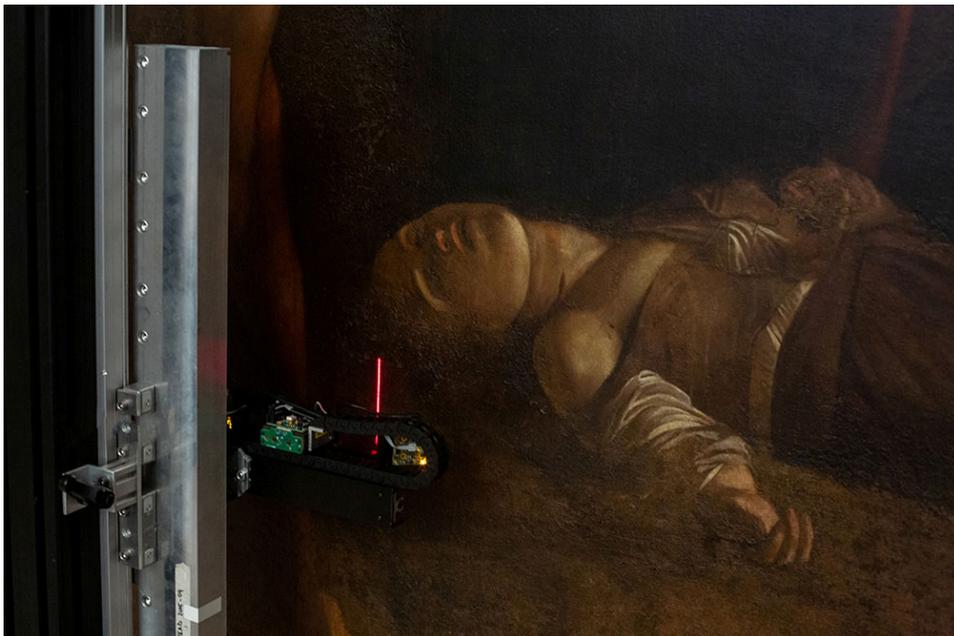
The high-resolution recreation of Caravaggio's stolen *Nativity with St Francis and St Lawrence*

In 1969 Caravaggio's *Nativity* was stolen from the Oratory of San Lorenzo, in the heart of Palermo. For many years the empty frame was a witness to its absence. In December 2014 Peter Glidewell invited Adam Lowe, founder of Factum Foundation, to Palermo to meet Bernardo Tortorici Montaperto, head of the "Associazione Dimore Storiche" and of "Amici dei Musei Siciliani", and a re-creation of the lost *Nativity* was therefore commissioned to Factum Arte, who was not new to working with paintings by the artist: in 2009, to celebrate the 400th anniversary of the death of Caravaggio, the municipality of Caravaggio commissioned the Fondazione Giorgio Cini and Factum Arte to make facsimiles of three paintings by Caravaggio in the church of San Luigi dei Francesi in Rome.

Officially unveiled on December 12th 2015, the reproduction of the stolen *Nativity with St Francis and St Lawrence* now hangs in the exact spot where the original hung, above the altar in the Oratory of San Lorenzo in Palermo.

The high-resolution recording in 3D and colour of Caravaggio's *Burial of Saint Lucy* in Syracuse

Between 24th and 30th June 2020, Factum Foundation carried out the recording of Caravaggio's *Burial of St. Lucy* in the Chiesa di Santa Lucia alla Badia, Syracuse.



Recording the surface of Caravaggio's *Burial of Saint Lucy* in the Chiesa di Santa Lucia alla Badia using the Lucida 3D Scanner

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Factum Foundation's ongoing projects in Italy

Since its creation in 2009, Factum Foundation has carried out major projects involving Italian cultural heritage, both for conservation and exhibition purposes. Below is a list of relevant ongoing projects.

'La Riscoperta di un Capolavoro'

18 May 2020 – 10 January 2021

Palazzo Fava, Bologna

The city of Bologna is celebrating the return of the *Polittico Griffoni*, one of the greatest altarpieces of the Bolognese Renaissance, with two exhibitions commissioned by Fabio Roversi-Monaco, president of Genus Bononiae, and supported by Fondazione Cassa di Risparmio in Bologna. 'La Riscoperta di un Capolavoro' consists of two exhibitions involving Factum Foundation: 'Il Polittico Griffoni rinasce a Bologna', curated by Mauro Natale and Cecilia Cavalca and designed by Roberto Terra, focuses on the importance and meaning of the altarpiece, of which Factum Foundation recorded, between 2012 and 2015, the sixteen surviving panels scattered in museums and collections around the world. As a genuine example of how new technologies are changing exhibition organizing a facsimile by Factum Foundation reunites the panels of the Polittico in a layout proposed by Cecilia Cavalca. On the second floor, 'The Materiality of the Aura. New Technologies for Preservation', curated by Adam Lowe, Guendalina Damone and Carlos Bayod Lucini, focuses on the ways in which Factum Foundation uses technology to help with the long-term preservation of diverse forms of cultural heritage. This approach involves documentation, monitoring, in-depth study, and the recreation and dissemination of objects in both physical and virtual forms. The city of Bologna, where Factum has been working for more than 10 years, is the theme that runs through each room, casting new light on works including the *Polittico Griffoni*, the Sala Bologna in the Vatican, the sculptural doors of San Petronio and the terracotta figures from Santa Maria della Vita.

The Aura in the Age of Digital Materiality

Silvana Editoriale and Factum Foundation, 2020

Digital technologies are profoundly changing how we relate to art, from the ways in which we access and display objects to how we safeguard, restore, archive and even possess them. *The Aura in the Age of Digital Materiality*, meant to accompany Factum Foundation's exhibition in Bologna, explores themes emerging from the unprecedented potential of the meeting between digital technology and cultural heritage at a time when we are being forced to fundamentally rethink what we value, how and why. It brings together recent projects by Factum and a wonderfully diverse collection of essays, many written especially for this book, by collaborators and friends.

Their widely different backgrounds and disciplines only illustrate the importance of this subject and the huge range of its relevance. Contributors include Hartwig Fischer, Director of the British Museum; Mari Lending, the author of *Plaster Monuments: Architecture and the Power of Reproduction*; Nadja Aksamija, Professor of Italian Renaissance and Baroque art and architecture at Wesleyan University; Egyptologist Nicholas Reeves; Pulitzer Prize-winning author Richard Powers; Shirley Djukurnã Krenak, Indigenous activist from the Upper Xingu; philosophers Bruno Latour, Brian Cantwell Smith and Alva Noë; Simon Schaffer, Professor of the History and Philosophy of Science at the University of Cambridge; architect Charlotte Skene Catling; Jerry Brotton, specialist in cartography and the Renaissance; and Chiara Casarin, Director of the Musei Civici di Bassano del Grappa.



'Raffaello'

2 June – 30 August 2020

Scuderie del Quirinale, Rome

As a tribute to the 500th anniversary of Raphael's death, Scuderie del Quirinale in Rome opened 'Raffaello', curated by Marzia Faietti and Matteo Lanfranconi, with contributions from Vincenzo Farinella and Francesco Paolo Di Teodoro and the supervision of Sylvia Ferino-Pagden as President of the scientific committee. *Raffaello* looks in depth at the artist's life, his diverse works of art and his wide-ranging influence: more than 200 artworks, 100 of them by Raphael, were loaned from all over the world.

Factum Arte created the starting point of the exhibition: a rematerialisation of the painter's tomb from the Pantheon, with its 19th-century additions removed upon request of the curators. After a Factum Foundation team carried out the recording of the original tomb in the Pantheon in December 2019, almost all of Factum's departments were involved in the rematerialisation process from the acquired digital data, with engineers, architects, sculptors, artists, welders and digital experts working side by side on the various elements making up the tomb.

The recording of Raphael's *Cartoons* at V&A

In August 2019, a team of 3D recording and high-resolution panoramic photography specialists from Factum Foundation carried out the recording of the Raphael *Cartoons* at the V&A in London, which have been loaned by Her Majesty The Queen from the Royal Collection. This project was one of Factum Foundation's most ambitious digitisation works undertaken to date. It was a project which required meticulous planning and recording innovations to suit the specific requirements of the artworks, as well as close coordination with the teams from the V&A, Royal Collection Trust and Momart.

The data is currently being processed in Factum Foundation's Madrid workshops: hundreds of overlapping 3D scans will be stitched together, and the datasets for colour and 3D will be merged to produce multi-layer records of the seven *Cartoons*. The results will set new standards for cultural heritage documentation, allowing these masterpieces of Renaissance art to be seen up close as never before.

Recording the island of San Giorgio in Venice

From 6th to 17th July, a team from Factum Foundation will be in Venice to carry out the recording of the Island of San Giorgio Maggiore. Working with the Fondazione Giorgio Cini, Ecole Polytechnique Fédérale de Lausanne (EPFL) and Iconem, the aim is to record the entire island using several recording methods such as aerial and ground-based photogrammetry and LiDAR recording.

This initiative will serve as a pilot project to record the whole of Venice. Factum Foundation and the Fondazione Giorgio Cini have been working together since 2006 and launched ARCHiVe (Analysis and Recording of Cultural Heritage in Venice) in 2018.



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‘Nulla è perduto’
4 July – 13 December 2020
Casa delle Esposizioni, Illegio

From July 4th to December 13th 2020, the Lost Paintings re-created in collaboration with Sky Arte and Ballandi Arts for the series ‘Mystery of the Lost Paintings’ will be displayed as part of the exhibition ‘*Nulla è perduto*’ in the town of Illegio, Italy. Curated by Don Alessio Geretti, the event is a tribute to the ways in which cultural heritage that has been lost or stolen can be recreated. The seven great paintings by Vermeer, Monet, Van Gogh, Franz Marc, Klimt, Lempicka, and Sutherland were destroyed, stolen or lost during the 20th century and a team from Factum Arte recreated each painting in collaboration with experts and museum collections around the world, revealing the artist’s biography, the character of the original paintings and the discussions that accompanied the rematerialisations.

About Factum Foundation

Factum Foundation for Digital Technology in Conservation is a not-for profit organisation founded in 2009 in Madrid by Adam Lowe. It works alongside its sister company, Factum Arte, a multidisciplinary workshop in Madrid dedicated to digital mediation and physical transformation in contemporary art and the production of facsimiles. The Foundation was established to demonstrate the importance of documenting, monitoring, studying, recreating and disseminating the world’s cultural heritage through the rigorous development of high-resolution recording and rematerialisation techniques. The Foundation’s activities include: building digital archives for preservation and further study, creating and organising touring exhibitions, setting up training centres for locals to learn the different technologies developed by the Foundation to record their own cultural heritage, and producing exact facsimiles as part of a new approach to conservation and restoration.

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