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## New technologies will bring back Velázquez's works to Seville

A ground-breaking high-resolution recording project in 3D and colour will result in the production of exact facsimiles of paintings by the artist, ahead of the opening of the Casa Natal de Velázquez

On the 4<sup>th</sup> and 5<sup>th</sup> February 2020, a team from Factum Foundation will carry out the high-resolution digitisation in 3D and colour of *Old Woman Cooking Eggs* by Diego Velázquez at the National Galleries of Scotland, Edinburgh.

Painted between 1618 and 1623 during Velázquez's early life in Seville, *Old Woman* is considered one of the most emblematic of the works painted while he lived in his hometown. The digitisation marks the first phase of a wider collaboration between Factum Foundation and CEEH (Centro de Estudios Europa Hispánica) that will culminate in a display and exhibitions project for the new Casa Natal de Velázquez in Seville, which is projected to open in 2021.

Working together with CEEH's director José Luis Colomer, Factum Foundation will carry out the digital recording of several paintings from the artist's early years with the aim of producing an 'exact' facsimile of each work – a facsimile that will be indistinguishable from the original to the naked eye. The paintings will be scanned using state-of-the-art technology to capture high-resolution relief and colour information of their surfaces. The facsimiles will be made at Factum Arte's Madrid workshops using the data recorded and employing new technologies combined with traditional artistic and craft techniques. The data will also provide vital documentation about the current conservation state of each recorded work.

The Casa Natal de Velázquez, established by the author and journalist Enrique Bocanegra, will house a new interpretation centre and permanent exhibition spaces. The visitor will have the opportunity to see exact facsimiles of Velázquez's early works in the house where the artist lived for the first twenty-three years of his life – a unique context in which to understand Velázquez's private life, his studies and influences. Factum Arte, with the support of Factum Foundation, will also contribute to the recreation of the space by recreating a selection of objects and design elements that appear in Velázquez's famous (and, in those days, innovative) *bodegones* or scenes of daily life from Seville at a time when the city was at the height of its powers as the gateway to a new world of exotic materials and wealth. The Casa Natal de Velázquez project is supported by the British consultancy Achatés Philantropy and the Sevilla City Hall, who is currently working on an initiative to convert the houses of its most important offspring, such as the poet Luis Cernuda, into interpretation centres dedicated to their life, work and times.

*"The objective is clear: Seville must recover Velázquez's legacy. The most important works the artist painted in the city where he was born and where he developed as an artist have spent centuries outside Spain. They can be found in some of the best galleries and museums in the world, but, working with 21<sup>st</sup> century technology we are going to produce paintings so nearly identical to the originals that it is likely Velázquez himself would be unable to distinguish between the two. These reproductions will be on permanent view in the house where he was born, re-establishing thus the relationship between Seville and her most illustrious son."*

Enrique Bocanegra, author, journalist, and Director of the Casa Natal de Velázquez



Diego Velázquez, *Old Woman Cooking Eggs*, National Galleries of Scotland.  
Purchased with the aid of the Art Fund and a Treasury Grant 1955

### **Factum Foundation and Casa Natal de Velázquez**

Factum Foundation is currently in discussion with several museums and international collections regarding the digitisation and reproduction of a series of works by Velázquez – a final list of paintings will be revealed in the next months. The data will allow conservators to monitor the current conservation state the works, enabling close study of their colour and relief as never before. In digital format, by means of high-resolution online browsers, the data will also assist with the communication and dissemination of Velázquez's oeuvre. Facsimiles produced using the data will belong to CEEH and will be on permanent display at the interpretation centre at Casa Natal de Velázquez. The digital data, however, will belong to the owner of each of the recorded paintings.

The building on N° 4 Calle Padre Luis María Llop, the Casa Natal de Velázquez – considered to be the birthplace of the artist in Seville – is currently being converted into a major new interpretation centre. It is

hoped that this innovative display and exhibition project will become an international point of reference in the Andalusian capital, attracting a varied public and fomenting a rigorous, in-depth approach to Velázquez's early work and the context in which it was created – Seville in the Spanish Golden Age.

As well producing facsimiles, Factum Foundation will also participate in the project for Casa Natal de Velázquez, working on the design of the exhibition spaces in close collaboration with the architects in charge of the restoration. Factum will supervise the selection of materials and finishes for the interior, creating furniture and objects inspired directly by the Velázquez's paintings. Various 3D manufacturing techniques will be used in conjunction with artisanal techniques to produce these pieces and special emphasis will be placed on collaboration with artisans and studios based in Seville. The project has academic support in the form of a group of recognised experts on Velázquez, as well as historic consultancy from specialists in the architecture and daily life of the Spanish Golden Age.

Looking through the prism of Velázquez, his environment and circle, visitors will also be able to learn about early 17<sup>th</sup> century Seville, when the city had a fundamental role as a link to the America, and could act as an inexhaustible font of new ideas, themes, techniques and materials for the artist's work. The interpretation centre will examine, too, the central role played by Velázquez's teacher and father-in-law Francisco Pacheco through the reproduction of several of his works. The centre will also house a facsimile of his treatise *The Art of Painting* based on a 1649 edition, as well as other documents related to this important figure.

Factum Foundation has a clear vision regarding the dissemination of art, culture and knowledge in the 21<sup>st</sup> century, and this project will bear similarities to other recent initiatives such as the [exhibition 'Madame de Pompadour in the Frame' at Waddesdon Manor](#) (May 2019- Spring 2020); or the [current installation at Strawberry Hill House](#), where facsimiles of works that once belonged to Horace Walpole's collection are on permanent display. These projects, amongst others, demonstrate that it is essential to keep an open mind with regards to originality and authenticity when presenting the history of a work of art to the general public. The juxtaposition of original works of art with facsimiles at Casa Natal de Velázquez, the artist's first home, is just one display possibility that digital technology is now allowing us to explore.

*"The new interpretation centre at Casa Natal de Velázquez assembles exact facsimiles of Velázquez's Sevillian oeuvre together with a collection of original pieces in one space: the house where Velázquez was born and was shaped as an artist."*  
Carlos Bayod Lucini, Project Director, Factum Foundation

### **Digitisation Techniques**

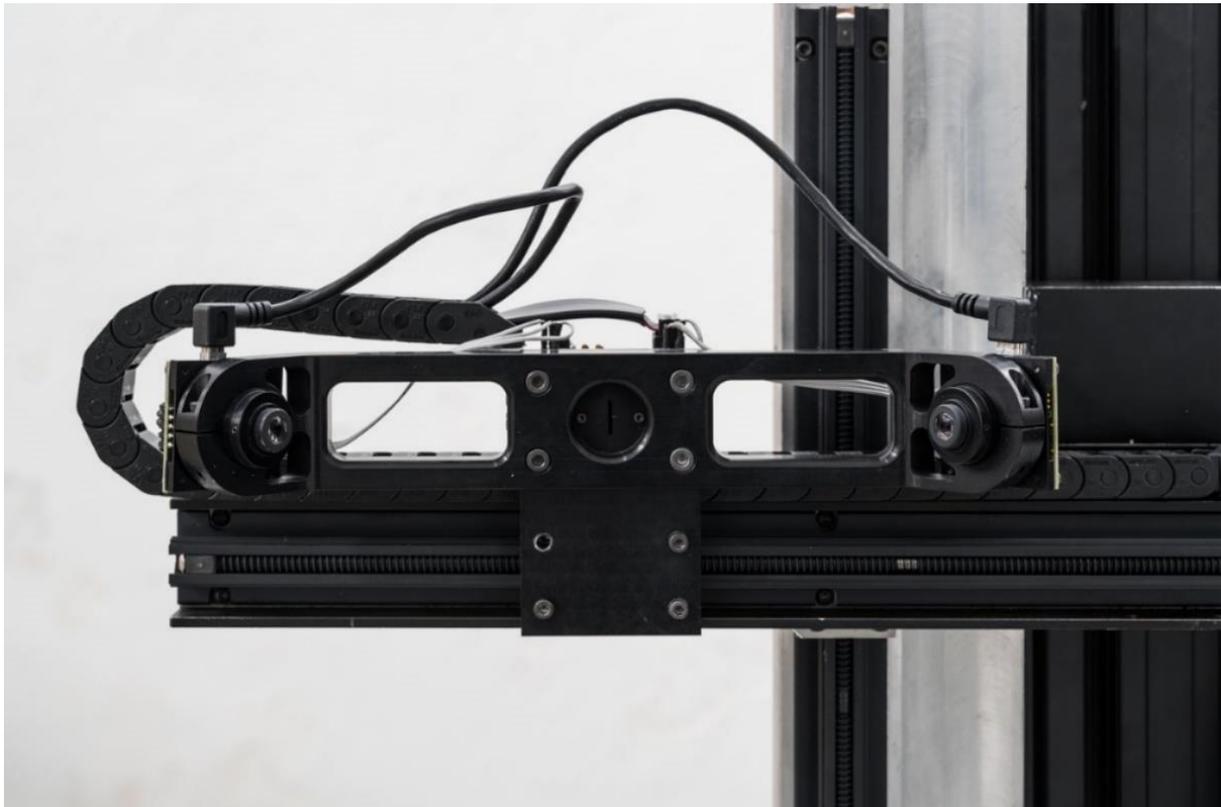
The digitisation of Velázquez's paintings will be carried out using two complementary techniques: the Lucida 3D Scanner to obtain relief data, and panoramic photography to capture colour.

#### ***The Lucida 3D Scanner (relief)***

The Lucida 3D Scanner is a close-range, non-contact recording system that captures the surface of paintings and other low-relief objects in high-resolution. The scanner was developed by the Spanish artist Manuel Franquelo together with a team of engineers at Factum Arte, with logistical support from Factum Foundation. The Lucida 3D Scanner is a unique system, capturing high-quality relief data from any painted surface – the information is not affected by the colour, shine or contrast of the work. The Lucida has been used to digitise hundreds of works of art in museums and collections around the world, from the Museo del

Prado in Madrid to the Valley of the Kings in Luxor (Egypt), with the aim of contributing to the conservation, study and dissemination of cultural heritage.

*“The Lucida 3D Scanner is key to the success of the Casa Natal de Velázquez project – it will allow us to document and reproduce the rich texture of the paintings. This system, which for the first time will be used to record works by Velázquez, will enable the viewer to see details on the surface, the artist’s brushstrokes – in essence, the character of the work – like never before.”* Carlos Bayod Lucini, Project Director, Factum Foundation



The Lucida 3D Scanner. Image © Oak Taylor-Smith for Factum Foundation

### **Panoramic Photography (colour)**

In order to capture accurate, high-resolution colour data of a flat or gently curved surface such as a painting or mural, we employ a specialist version of the technique known as panoramic photography. This technique, which has evolved from landscape photography, involves taking hundreds of overlapping photographs from a static point before ‘stitching’ them together to create a single high-resolution image of the work. This image is then ‘registered’ or laid onto the 3D relief to produce a second image combining the two datasets. The resulting files can be used to study a painting in great detail, but are also useful for the production of an exact facsimile.

## **About Factum Foundation and CEEH**

*Factum Foundation for Digital Technology in Conservation*  
[factumfoundation.org](http://factumfoundation.org)

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 local actors to master and later independently use technologies developed by the Foundation; and producing exact facsimiles as part of a new approach to conservation and restoration.

*CEEH – Centro de Estudios Europa Hispánica*  
[ceeh.es](http://ceeh.es)

CEEH is a private institution, independent of public funding, that assists cultural initiatives that aim to promote international Hispanic studies and academic excellence. Working independently or in conjunction with other institutions, CEEH publishes rigorous academic studies within its areas of interest, produces documentaries on historic and artistic subjects, and organises exhibitions to disseminate the work carried out by university professionals and museum conservators, both in Spain and internationally.

CEEH's principal objectives are to encourage the study of the Spain's presence and influence in Europe at the time of the Habsburg empire, and to promote academic interest in the art and culture of the Spanish Golden Age in its European context. CEEH is also interested in the international reception of Hispanic culture, in any of its expressions and from any historical period. As a result, CEEH also prioritises the promotion and dissemination of the work of international Hispanic experts, paying homage to them by means of commemorative events or by awarding research grants.

## **Communication and press – Factum Foundation and Factum Arte**

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