

The Black Square receives a digital facsimile. New technologies are being used to study Malevich's painting at the Tretyakov Gallery

By Olga Kabanova

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In the first place, it must be said that this time there are no sensational discoveries. Three years ago, when an examination of the Black Square made it possible to reveal three words written in pencil on the surface of the white paint — "battle of negroes" and "night" — the public were inundated with countless articles.



The more recent investigation, only just coming to an end, concerns the two Malevich *Black Squares* at the Tretyakov Gallery (the first from 1915 and the artist's copy from 1929). It forms part of a wider initiative by the research department that as its objective the creation of a data bank comprising the most complete information possible about works in the Gallery's collection. YulianKhalturin, head of department, considers that with this project the Tretyakov is working to the same standards as the best European museums. He emphasises that new avenues for investigation – the use of modern technology, major research projects and creation of databases from the results – have entered departmental practice in the last few years.



However, the *Black Square*, perhaps the most famous work of Russian art, has here too taken a leading role. The result of a collaboration between the museum and Spanish organisation Factum Arte Foundation for Digital Technology in Conservation is a unique 'product' – a digital facsimile of the painting. The digital facsimile integrates four image layers comprising the entirety of the painted surface: a high-resolution colour photograph, a 3D scan of the surface, and X-Ray and Infrared images. Each image can be seen individually or together with others. This makes it possible to employ the latest techniques in understanding even minor changes to the conservation state of a painting.

A digital facsimile now exists for both *Black Squares*. Nevertheless, it's clear that the facsimile was all the more necessary for the first version, which is older and was painted, as was ascertained earlier, over two pre-existing suprematist compositions.

Adam Lowe, founder of Factum Arte Foundation, approached the Gallery with an offer to produce a 3D-scan of the painting, His foundation, a non-commercial organisation working in the digitisation of objects of cultural heritage, has collaborated with a number of museums and art institutions. He responds thus to the question of why he was interested specifically in the 'icon of Suprematism': "The *Black Square* has been of great interest to me for many years. In 2001 I wrote the text 'To see the world in a square of black' for the Iconoclash Exhibition at ZKM Karlsruhe. The text was a reflection on the iconoclastic or iconophilic nature of the original *Black Square* painting. The 1915 *Black Square* is an enigmatic work, now with surface craquelure revealing the underpainting. This resulted from the fact that the lower layers were not fully dry."

"In March of this year Factum Arte sent a team to scan the *Black Square* 1915 and the 1929 copy," Lowe continues. "The scanning consisted of 3D surface recording using the Lucida Laser scanner and high-resolution composite colour photography. The two files, containing information about the topography of the surface and its colour, can be merged in perfect register and aligned with X Ray, infrared, and other multi-spectral recordings."

The Tretyakov Gallery produced an X-Ray image of the whole painting. It was taken in sections that were subsequently merged. The infrared photography was carried out employing an equally careful, phased methodology. The result is a remarkable digital product that opens up a deeper, totally novel way of examining the physical condition of the *Black Square*. New ways of studying and understanding the creation of the painting have appeared, and step by step it becomes possible to meticulously decode the images hidden by the layer of black paint.