

Solar geometry sheds new light on historic painting

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John Constable - Salisbury Cathedral from the Meadows 1831. Credit: Tate, London 2013

A re-examination of the iconic John Constable work, Salisbury Cathedral from the Meadows, has found that the original 1831 exhibited version of the painting did not have a rainbow – and that it was added later to correspond with the time of his best friend's death over a year later.

The new research explains how a reassessment of the solar geometry of the [painting](#), and the painter's considerable understanding of contemporary rainbow theory, suggest that that the rainbow was added in at a later date as an homage to John Fisher, who died on the afternoon of 25 August 1832.

Not only did Constable add the rainbow to the painting, but he also depicted the end of the rainbow to rest on Archdeacon John Fisher's house, where Constable came to stay during his visits to Salisbury.

John Constable is well-known for his powers of observation and thirst for meteorological knowledge, which propelled him to paint more natural-looking skies than nearly all other English artists before or since.

Professor John Thornes, Emeritus Professor of Applied Meteorology at the University of Birmingham, explained, "Constable was a great believer that painting is a science, something that should be pursued with the aim of understanding the laws of nature. This approach is clearly applied to the clouds and weather in his works, but it was not the case with all of his depictions of rainbows. Unlike clouds, rainbows are seen much less frequently in his [work](#) and were therefore often more mysterious in their symbolic function."

Professor Thornes' previous research into Constable's work concluded that the rainbow was meteorologically impossible from the implied position of the sun in the sky.

Now, however, he has the benefit of recently developed computer software that can calculate the solar geometry of any rainbow at Salisbury for any day of the year, allowing different conclusions to be drawn as to the probability of such a rainbow being visible to Constable and its relationship with the height of the cathedral in his painting.

Professor Thornes added, "Our understanding of the history of this work will now have to be rewritten. Of course, it's very possible that there are number of other secrets that lie within the skies of his works and those of his contemporaries."

Indeed, previous work by Professor Thornes [identified the accuracy of Monet's paintings](#) of the Houses of Parliament.

John Constable's iconic Salisbury Cathedral from the Meadows was acquired for the nation in 2013 at a cost of approximately £23m. Since then it has been touring the UK under the guidance of Aspire, based at Tate Britain in London.

Having been initially on display at the Tate it has been seen in Cardiff, Ipswich and St Davids and is currently close to home at the Salisbury Museum. The new research examining the solar geometry of the [rainbow](#) was commissioned by Aspire and is soon to be published online at Tate Britain as part of their 'In Focus' series.

Provided by University of Birmingham

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