

New portrait to mark Hooke's place in history

January 12 2012



Chroniclers of his time called him ‘despicable’, ‘mistrustful’ and ‘jealous’, and a rivalrous Isaac Newton might have had the only surviving portrait of him burnt, but, three centuries on, Robert Hooke is now regarded as one of the great Enlightenment scientists.

It was Hooke’s dispute with Isaac Newton over credit for Newton’s work on gravity that tainted more than two hundred years of historical writing about Hooke, as it is chronicled that he fought for greater credit than Newton offered for the guiding principles which were later detailed in Newton’s *Principia*.

Despite the folklore, however, there is now no doubt that Hooke had a profound influence on the history of physics, not least through the law of elasticity which he drew up while working as Robert Boyle's assistant in 1660; a law of physics that now bears his name.

Now, thanks to Rita Greer, a history painter, who has undertaken a project to memorialize Hooke, a portrait of the scientist will be hung at the Institute of Physics (IOP) in London.

The hanging of the portrait is the centrepiece of a day of talks, on Thursday 12 January, which has been organized to commemorate Hooke's life.

Following Hooke's death in the early 1700s, Newton was appointed President of the Royal Society and it was during his time in this capacity that, it is thought, the only portrait of Hooke was destroyed – it is unclear whether the portrait was destroyed on Newton's command or simply left to perish.

With no visual sources for reference, Greer has used written sources – including the chronicles of both John Aubrey and Richard Waller – to create a likeness of Hooke with details fitting to his position in the history of science.

The image set to be hung at IOP shows Hooke holding a quill and a book in his right hand and a spring in his left. The spring represents one of Hooke's defining successes – Hooke's law of elasticity.

Hooke's law states that the extension of a spring is in direct proportion to the load applied to it – a law which many materials obey and which culminated in the development of a balance spring. Balance springs subsequently enabled the development of portable timepieces – the first watches.

The history artist Rita Greer says, “Robert Hooke, brilliant, ingenious seventeenth century scientist was brushed under the carpet of history by Sir Isaac Newton and his cronies. When he had his Tercentenary there wasn't a single memorial to him anywhere. I thought it disgraceful as Hooke did many wonderful things for science.

"I have been working on a project to put him back into history where he belongs – up with the greats. I have been on the project for eight years and this portrait for IOP is no.8 in the series, with others memorials already in place at a range of high-profile locations in both Oxford and London."

Sir Arnold Wolfendale FRS, a former President of the IOP and former Astronomer Royal, says, “Robert Hooke was a brilliant man of many parts of which one was physics. He was also remarkable for many advances and discoveries for which he did not receive adequate credit.

“With her fine portraits of Hooke, Rita Greer is going some way towards redressing the balance and bringing Hooke's image to a wider audience. I think that Hooke would have been pleased with her persistence, as we are at the IOP."

Robert Hooke was a key part of the group that went on to form the Royal Society, becoming the first Curator of Experiments for the Society in 1662.

Hooke has many physics-related credits to his name, including the construction of the vacuum pumps used in Boyle's gas law experiments, building some of the earliest Gregorian telescopes and observing the rotations of Mars and Jupiter, deducing the wave theory of light, and being the first to suggest that matter expands when heated and that air is made of small particles.

However, as a polymath, Hooke was probably best known in his own lifetime for a publication called *Micrographia* in which is printed Hooke's drawings from observations using a microscope, the most famous of which is a drawing of a flea.

Provided by Institute of Physics

Citation: New portrait to mark Hooke's place in history (2012, January 12) retrieved 26 April 2024 from <https://phys.org/news/2012-01-portrait-history.html>

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