

Hidden treasure: Technique reveals buried image in famed illustrator's painting

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Researchers are using a new X-ray technique to identify the original details and colors of the "fist-fight" image (above) hidden underneath this "Family Portrait" painting. Credit: Brandywine River Museum

Scientists today reported use of a new X-ray imaging technique to reveal for the first time in a century unprecedented details of a painting hidden beneath another painting by famed American illustrator N.C. (Newell Convers) Wyeth.

The non-destructive look-beneath-the-surface method could reveal hidden images in hundreds of Old Master paintings and other prized works of art, the researchers say. The scientists reported the research at the 238th National Meeting of the American Chemical Society (ACS).

Jennifer Mass, Ph.D., and colleagues note in the new study that many great artists re-used canvases or covered paintings with other paintings. They did this in order to save money on materials or to let the colors and shapes of a prior composition influence the next one, she says. Art historians believe that several of Wyeth's most valued illustrations have been lost from view in that way. Some regard N.C. Wyeth (1882-1945) as the greatest American illustrator of the 20th century.

One of these so-called lost illustrations depicts a dramatic fist fight and was published in a 1919 Everybody's Magazine article titled "The Mildest Mannered Man." Using simple X-ray techniques, other scientists previously showed that Wyeth had

covered the fight scene with another [painting](#), "Family Portrait." But until now, the fine detail and colors in the fight scene have been lost from view. Nobody has seen the true image except in black and white reproductions.

The new instrument, called a confocal X-ray [fluorescence microscope](#), was developed at the Cornell High Energy Synchrotron Source (CHESS) national X-ray facility. The instrument reveals minute details in hidden paintings without removing paint samples. It shoots X-ray beams into a painting and then collects fluorescent X-ray "signals" given off by the chemicals in the various paint layers. Scientists can link each signal to specific [paint](#) pigments.

In addition to revealing the original image, the method is providing new information on Wyeth's materials and methods. The same technique may ultimately reveal hidden images in paintings by other famed artists, the researchers say.

Source: American Chemical Society ([news](#) : [web](#))

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