

THE SCIENCE OF ART



UNCOVERING GAUGUIN'S ARTISTIC METHOD

Analysis by a conservation scientist from the University of Saskatchewan assisted the National Gallery of Canada in their research on a sculpture by Paul Gauguin. The 19th century piece, Portrait of Meijer de Haan, was part of the NGC's Gauguin exhibit. The CLS was used to analyze paint cross-sections and confirmed that beeswax was applied as a coating over the paint and had infiltrated into the paint itself. The results have illuminated a key artistic technique employed by Gauguin 130 years ago.

Paul Gauguin
Portrait of Meijer de Haan, c. 1889-1890
Waxed distemper paint and metallic oil paint on oak, 58.4 x 29.8 x 22.8 cm
National Gallery of Canada, Ottawa
Photo: NGC

CONSERVING RITA LETENDRE'S FAMOUS ARTWORKS

Science can help conserve oil paintings like Rita Letendre's abstract work. The Art Gallery of Ontario and the Canadian Conservation Institute used the Mid-IR beamline to shine light on the source of deteriorating brushstrokes. They found that a combination of experimental techniques and paint additives was behind both crumbling base layers and delicately soft spots on the canvas. Understanding the source of degradation is key to restoration efforts and helps professionals restore priceless works of art.

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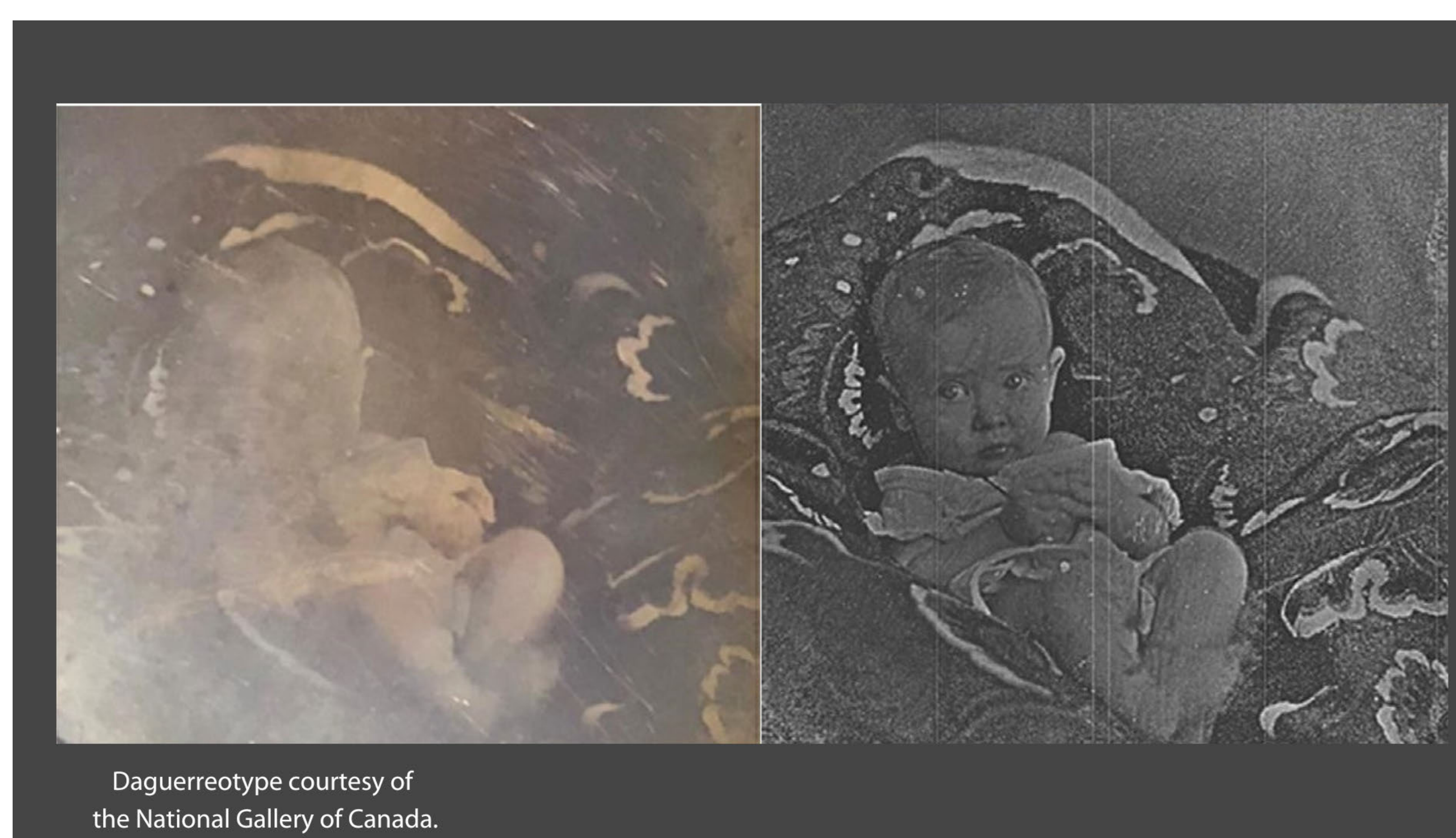
Rita Letendre
"Victory" (Victory), 1961
Oil on canvas, Overall: 202.6 x 268 cm
Art Gallery of Ontario
Gift of Jessie and Percy Waver, 1974, donated by the Ontario Heritage Foundation, 1988
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THE INTERSECTION OF SCIENCE, ART, AND HISTORY

Students and faculty at the University of Saskatchewan involved in a joint Chemistry/Classical, Medieval, and Renaissance Studies course used the CLS to shed new light on ancient coins and other artifacts, including a bronze inkwell from Medieval Persia. The class worked to uncover what the artifacts were made of, how they were made, and what happened to them over time. The project demonstrated the benefits of collaborative interdisciplinary research and highlighted how synchrotron science can provide new information about old artifacts.



Tom Ellis, USask



Daguerreotype courtesy of the National Gallery of Canada.

SEEING THROUGH THE FOG

Using the CLS, researchers from Western University have developed techniques for creating images of old, badly tarnished photographs that could also be used to study other historic artifacts and fossils and prevent corrosion on modern materials. The research could be a game changer when it comes to the conservation of antiques, especially for studying artifacts or fossils that have severe surface deterioration. The team says the technique could be used in a variety of scientific fields, from looking at tissue to materials science.

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