

Conserving *L'Idea del Cavaliere* by Marino Marini at the San Diego Museum of Art

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L'Idea del Cavaliere at the San Diego Museum of Art is the second of three bronze casts of the sculpture fabricated by the Fonderia Arte de Andreis in Milan (Fig. 25). The figures of the horse and rider are hollow cast in bronze and chemically patinated brown. Marino Marini painted the surface with red and black stripes, allowing paint drips to run down the horse and rider's distorted bodies. He also applied thick white paint to sections of the surface.

Mr. and Mrs. Norton S. Walbridge purchased the sculpture for the San Diego Museum of Art in 1967 from the art dealer Pierre Matisse, who acquired all three casts from the artist in 1962. Later in 1967, it was the first sculpture to be installed in the May S. Marcy Sculpture Court at the museum.¹ The sculpture court was officially established in 1968 to display the museum's collection of nineteenth and twentieth century outdoor sculpture.

After twenty-two years of exposure to moisture and strong ultraviolet light from the hot San Diego sun, the bronze oxidized to form a pale green layer of corrosion over the entire surface (Fig. 26 and 27). Opacifying agents in the paint migrated to the surface as the paint polymer deteriorated to create a pale, chalky appearance. Approximately thirty percent of the paint lost adhesion and flaked off of the sculpture. Because of the deteriorated appearance, the museum moved the sculpture indoors in 1989, where it remained until the conservation project in 1993. The aim of this article is to chronicle the research and decisions that led to conserving *L'Idea del Cavaliere*.

I. Project Background

In 1992, I worked as a contract conservator with staff at the San Diego Museum of Art to draft a grant proposal to the US Government's National Endowment for the Arts (NEA) to research the collection and develop a maintenance program for the museum's outdoor sculpture garden. We selected three works in deteriorated condition for full conservation projects. *L'Idea del Cavaliere* was one of the three.

¹ According to *The San Diego Union*, December 2, 1967. Newspaper clipping from the San Diego Museum of Art curatorial archive.

The project design was for Mary Stofflet, Curator of Modern Art, to perform art historical and collections research on each sculpture while I performed material research. By combining curatorial and conservation knowledge, we designed and implemented conservation and maintenance strategies for the entire collection. Our strategies were based on physical condition, the original physical appearance, and the artists' vision for how each sculpture should be experienced by the public. Fortunately the NEA funded our grant proposal. The results of the entire project were presented at a conference of the American Institute for Conservation in 1995.²

In the mid 1990s, combining art historical research in conjunction with material research was somewhat novel in sculpture conservation. The field of technical art history was also nascent.³ Part of the rationale for funding the project by the NEA was to establish a research model for other museums to follow. This project was not the only one during the 1990s to advocate collaboration between curators, conservators, and artists or their representatives. The International Network for the Conservation of Contemporary Art (INCCA) was created in Europe in 1999,⁴ with a mission to advocate collaborative research and sharing information about conserving contemporary art. The North American group, INCCA-NA,⁵ was founded in 2006, and the INCCA Iberoamerica (RICAC) group that includes Spanish and Portuguese speaking countries was formed in 2010.⁶

INCCA published a decision-making model in 1999 that captures the shift towards multifaceted, collaborative research leading to greater art historical understanding and strategies for conserving modern and contemporary art⁷ (Fig. 28). In this model, the physical condition of the artwork and its meaning as assigned by the artist and other circumstances are given equal weight in research. Following initial research, the model advocates comparing the discrepancy between the original appearance and meaning of the artwork with its current condition. Has the meaning changed because of physical alteration over time? If so, what are the conservation options to clean, repair, or stabilize the artwork? Should we attempt to restore it to approximate its original state, or should we stabilize it and leave it as it is? The article provides many examples and analyses of complex factors that lead to conservation decisions.

2 Twenty-third Annual Meeting of the American Institute for Conservation of Historic and Artistic Works. St. Paul, Minnesota. June 4-11, 1995.

3 For more information on technical art history, see AINSWORTH, Maryan W. "From Connoisseurship to Technical Art History: The Evolution of the Interdisciplinary Study of Art."

4 International Network for the Conservation of Contemporary Art (INCCA) <http://incca.org/>. (Accessed January 2, 2014).

5 International Network for the Conservation of Contemporary Art – North America (INCCA-NA) <http://incca-na.org>. (Accessed January 2, 2014).

6 INCCA Iberoamerica (RICAC) <http://www.ricac.net/index.php/encuentros/reuniones-locales/102-ata-reuniao-do-grupo-sao-paulo-da-ricac-e-incca-iberoamerica-marco-2012>. (Accessed January 2, 2014).

7 VAN ASSELDINK, Wilma et al. "The Decision-Making Model for the Conservation and Restoration of Modern and Contemporary Art."

II. Curatorial Research

Mary Stofflet researched the museum archives, interviewed prior staff and the original donor, and contacted a number of institutions including the Museo Marino Marini in Florence and the Fondazione Marino Marini in Pistoia. Through this research she gathered information about the origins of the sculpture and the artist's concerns for aesthetic expression. She also communicated with owners of similar equestrian sculpture by Marini to learn about their fabrication, conservation history and current condition.

In a letter dated 1970 from Pierre Matisse,⁸ he stated that the cast "is one of the three Marini did and which is identical with the exception of the painted surface." He further added, "I was indeed told by him (Marini) that one of the casts would be painted in blue and black but when we received the bronzes we discovered that they were painted, the three of them, in red and black. The artist did not carry out his idea of the blue and black and finally preferred to do them in red and black."

Stofflet learned that the effect of dripping paint down the surface was intentional, and critical to the meaning of the work. She considered it integral to the artist's expression, and a key symbolic reference to his preoccupation with suffering, tragedy, and the human condition. The attenuated and tortured figures were given greater expression by the bold colors and paint drips running down the surface. Without them, the meaning of the sculpture was severely compromised.

III. Conservation Research

As the curator conducted her research, I began my work by taking a full set of photographs to document the current condition. Next, I looked closely at the surface to discover more details about the fabrication process. The horse and rider were originally modeled directly on the base. The base itself was modeled in wood, as evidenced by the wood grain cast into the bronze. The fabricators separated the horse' legs and cut off the four corners of the base to take molds for the cast. The figures of the horse and rider were also cast in separate sections. All individually cast elements were welded together after casting. Additional iron pin supports were used to attach the figures to the base. The fabricators stamped the foundry mark in wax and attached it to the wood base before taking the mold (Fig. 29).

The only structural problems that developed over time were on the base. There were two cracks running down the sides. Additional cracks developed on the base around the attachment of three of the hooves. The top surface of the base was very thin. In fact, there were small holes all of the way through the bronze, revealing how thin it was. There was a clear risk of the top surface of the bronze base collapsing, given the seven hundred pound weight of the sculpture.

8 Letter from Pierre Matisse to Mr. Norton S. Walbridge, October 22, 1970. San Diego Museum of Art curatorial archive.

In addition to the red and black paint, there was a considerable amount of white material on the surface. Some of the white substance appeared to be paint, while other deposits appeared to be investment material from the original casting.

I took samples from the red and black paint, along with the white deposits from the surface. I sent the samples to conservation scientist John Twilley for analysis. He used a combination of x-ray diffraction, Fourier transform infrared analysis (FTIR), and polarized light microscopy on the red and black samples.⁹ We determined that the red is a toluidine red containing a precipitated barium sulfate extender. The black is as a very fine carbon black, also with a barium sulfate extender, or opacifier. The original paint medium wasn't identified, but it contained polyvinyl acetate, polyvinyl chloride, and a third unidentified organic resin binder.

Twilley analyzed the samples of white deposits on the sculpture using x-ray diffraction. Some of the samples contained aluminum metal and aluminum oxides. At first the presence of aluminum did not make sense. After reviewing where they were found on the sculpture in combination with early photographs, we realized that these metallic particles were residue of white paint. This confirmed that the artist used white paint in addition to the red and black. Most of this paint had flaked off of the surface.

Other samples of white material analyzed by Twilley contained quartz and gypsum particles. They were residue of investment material that was either left on the surface after casting, or deposited from water wicking out from the center of the sculpture through small cracks in the surface. The water could have come from rain, dew, and prior washing campaigns.

The early conservation history of the sculpture could be traced to a letter from Pierre Matisse to the director of the museum dated 1967,¹⁰ he suggested that "before the Marini bronze is installed on the Museum Sculpture Court it should be cleaned with water and not too hard a brush to eliminate dirt, grime or dust. Then a coat of clear bees wax should be applied. This waxing could be renewed every six months. This treatment applies to all bronzes displayed outdoors."

From this letter, and information learned from the museum archives, we determined that the sculpture had been routinely washed and coated with wax. Some of the paint could have worn off from the washing and waxing process. The water could have dissolved interior investment material that was re-deposited on the surface after evaporating.

IV. Conservation Ethics & Decision-Making

After comparing notes from our research, I sat down with the curator to determine a course of action. It was clear to us that the artist originally wanted

9 The results of the analyses are reported in two unpublished reports: *Analysis of Paint Pigment from Marino Marini's "L'idea del Cavaliere,"* August 10, 1993; *Paint Residue Analysis on Marino Marini's "L'idea del Cavaliere,"* San Diego Museum of Art, December 18, 1995.

10 Letter from Pierre Matisse to Mr. Warren Beach, November 24, 1967. San Diego Museum of Art curatorial archive.

the horse and rider to have a brown patina, and that he painted the red, black, and white paint on the surface. The curator felt strongly that he would not have approved of the severe alteration of the red and black paint.

Our first decision had already been made at the beginning of the project. The sculpture would remain indoors. It would not be exhibited outdoors again.

A second decision concerned the cracks in the thinly cast bronze base. I filled them with an acrylic paste and inpainted the fills with acrylic paint. I worked with the museum staff to design high-density plastic supports to fit under the base. The supports would help relieve the stress from the weight of the horse and rider around the hooves.

The remaining questions before us were whether to bring the corroded bronze back to a brown color and whether to re-paint the missing red, black, and white paint. Before making these decisions, I dry-cleaned the surface with soft brushes and a gentle vacuum cleaner, then wet cleaned it with distilled water and Triton XL-80N, a mild, non-ionic surfactant. It was thoroughly rinsed with distilled water and allowed to dry in the sun.

I also tested the solvent characteristic of the paint. Knowledge of its solvent sensitivities could guide us in deciding what medium to use in re-painting the missing paint. We learned that the remaining paint was well adhered to the surface, but that it was soluble in acetone and sensitive to petroleum solvents. Much to my surprise, we also learned that exposure to isopropyl alcohol re-formed the paint medium and returned the paint to its original bright colors.

After discussion with the curator and full photographic documentation, we coated all of the paint with isopropyl alcohol, and the appearance dramatically changed. The chalky red and black paint became bright again, approximating their original intensity before outdoor exposure.

After this, we held meetings with additional curatorial staff at the museum and conservators at the local Balboa Art Conservation Center to obtain a consensus on whether to repaint the missing paint, reduce the bronze corrosion, and coat the sculpture with lacquer or wax.

I pointed out that re-painting an artwork runs against traditional conservation ethics and principles that guide conservation practice. These principles are shaped by values that developed in the field over the past several centuries. They are enshrined in codes of ethics adopted by professional organizations such as the International Council of Museums – Committee for Conservation and the American Institute for Conservation of Historic and Artistic Works.¹¹

Conservators who join these organizations and subscribe to their beliefs and

11 Code of Ethics of the International Council of Museums - Committee for Conservation <http://icom.museum/the-vision/code-of-ethics/>. (Accessed January 2, 2014); Code of Ethics and Guidelines for Practice of the American Institute for Conservation <http://www.conservation-us.org/about-us/core-documents/code-of-ethics#.UsYiP2RDt38>. (Accessed January 2, 2014); SEASE, Catherine, "Codes of Ethics for Conservation."

standards are bound to honor the *authenticity* of the original incarnation of the artwork.¹² Yet artworks change over time. Do we honor the original appearance of the work, or the process of change? We make decisions based on our understanding of the artist's aesthetic intentions and concern for how the public experiences their work. Conservators are also bound by principles such as *minimal intervention* and the *use of materials that can be distinguished from the original artwork*.

Minimal intervention guides conservators to perform as little work as necessary on the artwork. This principle is frequently challenged and much discussed in the literature.¹³ Significant intervention is often undertaken to address physical damage such as paint loss or discoloration. When conservators replace missing paint on a damaged surface, they strive to use paint media that is different from the original. In part this is to allow future researchers to distinguish the original remaining paint from later additions. Using a medium with a different solubility will also allow a future conservator to remove the later addition without affecting the original paint.

The principle of *documentation* guides conservators to take photographs before, during, and after conservation intervention. In addition to photographs, conservators write treatment reports that not only include a detailed description of the intervention and the materials used, but the justification for the decisions made. This is particularly important when conservators undertake significant efforts to restore the original appearance of a damaged artwork.

I described technical options for bringing the green corroded bronze back to brown, and repainting the missing red, black, and white paint. The red and black paint could be repainted using early photographs that clearly indicated where the paint was originally located, including the drips down the figures of the horse and rider. The white paint could not be repainted with confidence however, since most of it was missing and we could not distinguish it from white deposits of casting residue in these early photographs.

Recovering the brown-pigmented patina on the horse and rider was technically the most difficult. I suggested three options. First, we could strip all of the paint off and repatinated the surface with chemicals. We would then have a brown sculpture without any of the original paint. This, we decided, was not an option. Second, I could coat the corroded surface with either clear or brown pigmented wax. We decided against this because it would not be reversible, and because the residual paint was partially soluble in mineral spirits – the same solvent used to dissolve wax. In the end, we decided to leave the corroded bronze surface as it was. No treatment was performed.

Next, I provided two technical options for replacing the missing red and black paint. I could use similar pigments to closely match the original, but paint them

12 For discussions of authenticity in conservation literature, see CLAVIR, Miriam, "Preserving What is Valued: Museums, Conservation, and First Nations"; LAURENSEN, Pip, "Authenticity, Change and Loss in the Conservation of Time-based Media Installations"; MUÑOZ-VIÑAS, Salvador, "Beyond Authenticity"; SCHEIDEMANN, Christian, "Authenticity: How to Get There?"; and WHARTON, Glenn, "The Challenges of Conserving Contemporary Art."

13 MUÑOZ-VIÑAS, Salvador, "Minimal Intervention Revisited."

in acrylic or watercolors. Both paint media would be different from the original, so future curators and conservators could distinguish the original from our additions. Acrylic would last longer, but it would be more difficult to remove without affecting what was left of the original paint. The solvents used to dissolve the paint in a future removal project would inevitably bleed into the original and partially dissolve it as well. Watercolor would be less stable in the future since it would be dissolved if anyone ever washed the sculpture again. Using the same argument, it could easily be removed with small amounts of water on a brush, without affecting what remained of the original paint.

We agreed that the missing red and black paint should be re-painted since it severely compromised the meaning of the sculpture. We decided to re-paint the missing red and black paint with watercolor using early photographs and evidence of paint particles on the surface¹⁴ (Fig. 30). We did not repaint the missing white paint since it was too difficult to determine exactly where it was originally applied.

V. Conclusion

The change in appearance after conservation intervention was dramatic (Fig. 31, 32 and 33). Replacing the missing paint challenged my practice as a conservator since I am guided by professional ethics of minimal intervention and honoring the authenticity of original materials used by the artist. Yet in the case of *L'Idée del Cavaliere*, the meaning was compromised by the deterioration from twenty-two years of outdoor exposure. Following the guidelines prescribed by the INCCA Decision-Making Model, the curator and I, along with other conservators and curators at the museum made a joint decision to re-paint the missing red and black paint. Preserving the symbolic meaning assigned by the artist required compromising the principle of minimal intervention.

Acknowledgements

I express my deep gratitude to Ana Gonçalves Magalhães and the Museu de Arte Contemporânea of the University of São Paulo for their inspiration in organizing the international seminar on the conservation of modern sculpture that led to this publication. I also thank the San Diego Museum of Art for providing images and supporting the publication of this article. Mary Stofflet, past Curator of Modern Art at the San Diego Museum of Art, undertook the art historical research reported in this article. She generously encouraged me to submit this article that chronicles the work that we did together. The research and conservation of Marino Marini's *L'Idée del Cavaliere* was financially supported by a grant from the National Endowment for the Arts.

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14 Marie Laibinis worked as an assistant conservator on re-painting the missing red and black paint.