Horn of Plenty

The History and Conservation of a Cornucopia Mirror

By Haejeong Yoon

Each academic year, a second-year student at the Williams College/Clark Art Institute Graduate Program in the History of Art is awarded the Judith M. Lenett Memorial Fellowship in Art Conservation by the Williamstown Art Conservation Center. The two-semester fellowship provides the student with the opportunity to research and conserve an American art object. This year's Lenett Fellow, Haejeong Yoon, worked on an 1820 decorative mirror in the collection of the Sterling and Francine Clark Art Institute. She was supervised by Hugh Glover, chief conservator of furniture and wood objects, with the aid of Christine Puza, assistant conservator in the same department. The project culminated in a public lecture at the Clark, from which the article below was adapted.

In 1997, Florence C. Chambers, daughter of American antiques collector George A. Cluett (1873-1955), donated a gilded-frame mirror as part of a gift of decorative objects to the Sterling and Francine Clark Art Institute. The mirror, which measures forty-one by forty inches and weighs nearly seventeen pounds with the glass, was brought to the Williamstown Art Conservation Center for treatment prior to exhibition.

The elaborately rendered frame features a carved-wood crest of wheat emanating from matching horns of plenty on either side. The abundant wheat crests symmetrically meet at the top, with the wheat stalks in the center facing upward while those on each side gently bend as they overflow the horns. The horns' open bells are delicately ruffled and the middle sections display a "spiraling-coin" design, accentuating the decorative intricacy. Below the coin embellishment, the lower sections of the horns are distinctively textured with an imbricated pattern of laurel leaves and berries, finished by twisted ropes fastened at the bottom with a ring.

The "horn of plenty," or cornucopia, motif symbolizes affluence, abundance, and the hope for a large harvest. The form extends to antiquity; a Greek vase from 440 BCE depicts a man holding a horn of fruit, as do Roman coins and statues from the first century. Rubens' 1630 painting *Abundantia* illustrates an allegory of the Roman goddess holding a horn overflowing with fruits, and Poussin's *The Nurture of Jupiter* (1635-37) depicts the god suckling a goat. The painting reimagines a Greek myth where a man holds a goat by its horns so it will stay in place to suckle young Jupiter.

The curatorial file offered limited information about the mirror's history. No definite maker or provenance was included, though the file indicated it was made in Salem in the early nineteenth century. The cornucopia motif appealed to Americans of that era, who found its depiction of abundance appropriate as a symbol of a rapidly growing nation, with its tremendous resources and talent.

A photo taken in George Cluett's Williamstown residence revealed that the mirror once hung in the dining room above a sideboard, suggesting it served an ornamental rather than practical function. What we call a mirror today was called a looking glass in the past, a descriptor more typically associated with glass plates with reflective coatings. In the early nineteenth century, the technique of manufacturing thick, ornamental reflecting glass had not yet developed in the US, and American demands were satisfied by imports from Europe. Such mirrors were expensive and precious objects.

The focus of my project was the ornate frame. To remove the glass, the mirror was placed face down on a styrofoam pad and the three-piece backing board removed. On the hidden face of the backing board we discovered five paper fragments of unknown age glued to the board. Some of the paper was obviously attached to the board to cover cracks and knots to keep dust from entering; one such piece covering a join was likely from a previous restoration.

Notably, four of the paper pieces were printed in archaic German script and were partially ripped, making them difficult to read. While I continued with the treatment, the photo lab applied infrared imagery and digital amplification to the inscriptions. More on those findings below.

Inspection revealed that the frame was constructed using traditional materials and methods: softwood, animal glue, nails, and simple wood joints. From the front, the frame looked like a single piece of intricately carved wood. From behind, however, it was easier to observe that the mirror is, in truth,

Georg Steinhauser, gilded cornucopia mirror frame, after treatment.

constructed of twenty to twenty-five separate wooden pieces, fitted with interlocking edges and glued in place.

The oval-shaped structure consists of four joined pieces of wood that form the base of the frame. The sheaves of wheat are individually carved and gilded and attached to the crest with nails. Two lower sections, the coin and laurel-leaf decorations, are made of "compo," a cookie dough-like composite of animal glue and linseed oil molded into intricate forms and adhered to the wood frame.

The mirror arrived from the Clark with the frame structurally sound overall, though with surface cracks of varying sizes. There was a large crack underneath each of the ruffled horns and another on the surface near the coin decorations. There were also some broken and missing pieces throughout, exposing the white inner layer of the frame. Loosening and cracking of the gilding layers had occurred as a result of continuous expansion and contraction of the wood from changes in humidity. Because gilding layers respond differently to atmospheric changes than wood, cracks and eventual losses of the gold leaf are not uncommon. The carved portions also contained missing ears of wheat that needed replacement.

Detail of mirror before treatment, showing missing wheat ears and broken tips. Opposite, Lenett Fellow Haejeong Yoon at work in the WACC furniture lab.

The frame's surface had deteriorated from decades of handling and surface grime. Cosmetically, the wheat leaves were generally very dark and lackluster, the result of a layer of bronze overpaint obscuring the previous gilding layers. The gold surface had abraded and discolored, and a previous restoration had employed the bright paint to make the frame appear new. Gold leaf is expensive, whereas bronze paint is much cheaper, so we might conjecture that the bronze paint on the top surface was applied to create a bright, gold-like effect without costing a lot of money. The effort would have been effective at first, but the bronze paint did not keep its luster over time.

To remove the bronze paint, I used a non-aqueous paint stripper and Xylene. I gently applied the solvent to the wheat sheaves until the surface became soft. I could then remove the softened bronze paint with cotton swabs. The treatment revealed the bright gilded surface, as well as sections where the gilded layer had been worn off or abraded and the original wood had become visible. I also found previously repaired sections of wheat that had been damaged or broken off and replaced with molded plaster. Some of these repairs were crudely done and also required restoration. With Hugh Glover, head of the wood objects department and my supervisor on the project, we decided to repair ten of the most conspicuously damaged wheat pieces.

The original wheat crest was hand-carved wood, but reproducing replacements using the original carving technique was neither timely nor financially viable. The most effective way to make repairs was to mold new wheat components using molded epoxy resins, a job that Hugh handled. After replacements were molded and trimmed, the repairs were put in place with glue and small clamps.

It was then time to turn to what for me was the climax of the year-long project, the gilding.

We conducted gildings on two separate occasions, first the wheat crest, then the horns. The original gilding of the wheat crest was water gilding, but we opted for oil gilding to protect the original gold layer. Oil gilding is removable, so conservators

working on the object in the future can remove what we did and approach the piece with yet undeveloped techniques.

To prepare for oil gilding, I first painted the surface with a burnt-sienna pigment. Once dried, an oil-based sizing adhesive was applied on the surface and allowed to cure for twelve hours, after which the surface was sticky and ready for gilding. Gilding tools included a suede cushion surrounded by parchment, a knife, a short flat brush made of squirrel tail called a tip brush, a soft brush for smoothing, and a "book" of gold leaf. Gold leaf is a delicate material, easily crumpled by even a breath. The suede cushion used for cutting and handling the gold was protected by white parchment to block all air currents. How thin is a sheet of gold leaf? A thousand sheets are equivalent to the thickness of a single sheet of printer paper.

I gently took a leaf from the book and placed it on the suede cushion to cut a rectangular piece with the gilder's knife. If the knife has grease on it, the gold leaf immediately sticks and the leaf gets damaged, so I had to be scrupulous about using a clean blade. I gently lifted the cut piece of leaf with the tip brush and applied the gold to the wheat. It immediately stuck to the surface almost like it was getting sucked in. I gently dabbed the gold against the wheat surface with a soft brush.

Although the newly gilded areas were shiny and beautiful, our goal was to match the repairs to the rest of frame. In other words, we had to create the illusion that the re-gilded surfaces were two hundred years old and matched the other wheat crest. I rubbed the new surface lightly with my finger, being careful not to cause major damage to the area because the gold leaf is vulnerable to even a little friction. The area turned a darker tone with the grease and pressure from my hand. The job was finished by air brushing a raw umber pigment mixed with gray powder to create a dusty effect.

The tricky part that remained was repairing the twisted horns and ropes on the frame bottom. Since there was a lot of conspicuous damage from cracks and dark stains, I first cleaned the surface, then filled the large losses. In order to make a cohesive surface color, I cleaned the laurel berry decoration as well. Fractured areas underneath the ruffled horns required consolidation, so I filled the cracks using gold-colored soft

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