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CONSERVATION OF THE DARNAULT MIRROR: STRIKING A BALANCE

Nancie Ravenel* and Gordon Hanlon**

The Darnault mirror frame (fig. 1) dated 1751, in the collection of the J. Paul Getty Museum, measures 11 x 4 1/2 feet and takes its name from the label of the *marchand-mercier* found on the white painted panel and frame constructed back board. It has an oval opening at the top which formerly housed a canvas painting, and thirteen overlapping gilded wood moldings attached to the back board with screws, which hold the looking glass in place. The frame is flanked by two narrow gilded and white painted wall panels which join the mirror frame's back board with tongue and groove joints. The painted areas had been repainted a number of times, and the gilding was grimy, flaking, water damaged, and covered with overpaint and a darkened glue size. The moldings have been repaired several times in the past, yet the frame retains evidence suggesting it was once an excellent example of the art of French eighteenth-century gilding (Considine 1991). Characteristic of the period is a lively and elaborately carved gesso layer which became evident when the clogged details were cleaned of the overpaint and grime (fig. 2). Carving of the gesso is known as recutting and was executed with hook-shaped tools which cut on the pull stroke, rather than the push stroke as is the case with chisels. Over the gesso is a thin layer of yellow size and, on the highlights of the carving, a red-brown bole. Also characteristic of the period is the sophisticated alternation of matte and burnished areas of gilding revealed after the moldings were initially cleaned. As exquisite as these passages are, other areas are in extremely poor condition with an exposed pock marked, porous, and friable gesso layer. The deteriorated size over the gilding also proved to be fairly intractable where thick. These extremes of condition seriously compromised the mirror's overall unity. The highly deteriorated surface was no longer representative of the French eighteenth-century aesthetic, and the frame could not be displayed in the context of other objects from the same period. The conservation treatment had to re-establish the aesthetic unity for the object to be fully meaningful, yet retain the original material for documentary purposes.

This paper will address the issues involved in the decision making process and some experimentation undertaken for designing a method to compensate surface losses in the gilt wood moldings. The treatment is still in progress, and continues to undergo alterations in technique and changes in approach due to the complexities imposed by the nature of the object and the aesthetic demands placed upon it.

Architectural mirrors were integral parts of the overall room interior which consisted of wall paneling, mantles, tables, and seating furniture. This frame and its accompanying panels are, therefore, a fragment of a larger unified decorative scheme. The curator will be displaying this mirror frame in a gallery setting, placing a console table under the mirror. The table is dated

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about 1750-55, after designs by Contant d'Ivry, and had been gilded by the dealer prior to purchase by the Getty Museum. The gilding on the table appears rather even, and lacks muscularity in the recutting and the alternation of matte and burnish one would expect from gilding of the French Rococo. It will not be necessary to return the mirror frame to such a new appearance, since the curator has asked that the new gilding on the table be altered to achieve a balance among the mirror, the table and a bed which will also be displayed in the gallery. Dated 1750 and attributed to Jean Baptiste Tillard, the bed's gilding is in an excellent state of preservation, and appears to be original with the exception of the highly burnished bands which were recently regilded by applying new leaf over the original layers of bole and gesso. Ideally, the level of restoration required for the mirror would replicate the level of preservation found on the bed's gilding.

Historically, gilt wood objects have been restored in a number of ways. They could be stripped back to the wood and be gilded again. Objects could be regilt whereby losses are filled where necessary and a new layer of gold leaf is applied over the original gilding layers. Regilding can be local, where new leaf was applied over areas of wear and loss. Objects could be regilded entirely where gold leaf was applied over original gesso and bole. In contrast, overgilt objects have new layers of gesso and bole applied over the existing gilding. This method has the disadvantage of obscuring details of the original recut gesso due to the thickness of the added layer. These three methods alter or conceal the original material, and regardless of the models used, the resulting surface will be a modern interpretation shaped by the aesthetic choices of the craftsman, curator, or conservator. Losses can also be compensated by filling and ingilding or by inpainting. Inpainting often simulates the gilded surface but occasionally, where a more archeological approach is permissible, losses are neutrally painted in imitation of the wood substrate or some other layer.

Where the mirror frame was in fairly good condition, it might be acceptable to isolate the losses, fill the areas of deep loss and ingild those fills and inpaint the sporadic pitting with gouache. However, these options might not be acceptable for the areas of widespread pitting, where small islands of gilding are surrounded by large areas of uneven gesso. These areas would require more intervention. They would have to be isolated overall, filled to bring the surface level, coated with new yellow size and red bole, and regilt. Since the amount of original gold leaf left in these areas was so small and our aim was to reunify the frame, would it not be possible to over-gild these areas, provided the new gilding did not clog up the recutting and was of the same appearance as the old gilding?

Traditional methods for compensating losses to the gesso layer using proteinaceous glues and whitening would not be separable from the animal skin glue-based original material on their own, but could be made separable with an isolating varnish. Non-traditional methods which use synthetic materials such as cellulose ethers and polyvinyl alcohols rather than the proteinaceous glues have been amply described in the literature (Adair 1992; Hebrand and Small 1991; Hoven

1992; Serlick 1993; Thornton 1991).

The desired method of compensation would re-establish the visual unity that had been destroyed by water damage and the darkened size layer, but would not alter the clarity of the recutting. The method should be fully separable from, yet compatible with, the original gilding. It had to be capable of providing a soft sheen in matte gilded areas, and a bright shine after being burnished. Since the quality and character of burnish achieved is dependent on the kinds of materials under the gold leaf, the gesso and the bole used to fill areas that will be burnished should be as similar physically to the original materials as possible. Thus, from the start we leaned towards the use of an isolation layer and rabbitskin glue-based gessos and boles rather than those based on the cellulose ethers and the polyvinyl alcohols.

If new layers were to be added to the mirror frame, the new material should be as thin as possible. The desirable characteristics for an isolating layer would be formation of a very thin film and reversibility in a solvent that would not affect the underlying areas.

Arkon P-90, a hydrocarbon resin produced by Arakawa Chemical,¹ was chosen to be tested as a barrier coating because of its small molecular size and its reversibility in mild solvents (de la Rie and McGlinchey, 1990). Its compatibility with protein-based materials was not known. A mock-up of the Darnault mirror's gesso was made by coating a piece of wood with a gesso made from over-cooked rabbitskin glue and calcium carbonate to simulate an aged gesso. When the gesso had fully dried, the mock-up was submerged under running water and dried in a microwave oven, producing a porous and cracked surface. One third of the surface was left unprepared as a standard, one third was painted with one layer of weak rabbitskin glue size colored with a dye, and the remaining third was coated with two layers of the colored rabbitskin glue size. Arkon P-90, dissolved in naphtha, was colored with a small amount of yellow oil paint and was applied to all three areas of the mock-up in three solution strengths, 15%, 45%, and 90%. The coating layers were colored so that the penetration of the materials into the gesso could be traced.

Arkon P-90 was readily absorbed into the control area of gesso, even at the 90% solution. One coat of rabbitskin glue over the gesso was successful at preventing penetration of the 45% solution into the gesso matrix. The rabbitskin glue size appeared to act as a consolidant for the porous gesso below and prevent penetration of the Arkon. At the 45% concentration of resin, it was still possible to apply gesso putty and bole, and burnish the gilded surface without cracking through the bole layer. The 45% solution did not fill the interstices of the carving whereas at higher concentrations of resin, gesso and bole beaded on the surface and the resin filled the interstices of the carving.

The first step in compensating the mirror frame was to document the areas of matte and burnish by taking 1:1 photographs of the moldings -- 63 8x10 black and white prints -- overlay them with mylar, and outline the areas of burnish and added or lost ornament. The documentation not only provided a specific record of the moldings after cleaning, but also would serve as a map for us to follow while applying bole and burnishing. It was decided to compare the aesthetic appearance of overgilding on a barrier coat with selective inpainting and ingilding on a total of three moldings. A lower portion of the mirror's painting frame and the upper most molding would be fully isolated with two coats of rabbitskin glue, followed by a layer of 45% Arkon P-90 in naphtha. Losses were filled with a traditional gesso putty of precipitated chalk and rabbitskin glue, coated with yellow size or with red bole where burnished areas were indicated on the documentation maps. They were then gilded and burnished, but not toned or distressed. The central shell over the mirror was only coated with rabbitskin glue and Arkon P-90 in the areas of loss, which were then filled with traditional gesso putty. The areas of loss in the matte areas were inpainted with gouache, and fills in the burnished areas were coated with red bole, ingilded, and burnished.

After completion of the gilding it was evident that there was not enough of a difference between burnish and matte on the fully isolated pieces. This method of compensation did not perform in practice as it did in theory or on the simplistic mock-up. The layers of rabbitskin glue and Arkon P-90 were filling some of the detail in the carving, which compromised the recutting. Application of what were perceived to be fine layers turned out to be too thick, which obscured the very fine veining recut into the petals and leaves. And, as mentioned before, the flexibility of the Arkon P-90 was not sufficient to produce a burnish comparable to the burnish on the original gilding. If overgilding were continued in this manner, a surface comparable to that on the console table would have been produced on the mirror frame, bearing little resemblance to that of the model, the bed. It was clear that the preferable route would be to inpaint or ingild the matte areas of loss and ingild the burnished areas in order to preserve the aesthetic integrity of the mirror frame and to display the art of the craftsman who produced the moldings. To a certain extent, the object will have to dictate how it will be compensated. The present aim is to make the best match possible by locally inpainting or ingilding, depending on what the area demands. This method is now considered preferable for achieving unity for the whole, rather than globally imposing a new layer on the moldings to force that unity.

The primary dilemma in the compensation of this mirror frame is the problem of aesthetically integrating three objects -- the mirror, the console table, and the bed -- which have similar origins and decorative elements, but have had three separate histories and exist in a range of states of preservation. Society's taste has historically demanded impeccable gilt surfaces. Since these surfaces are prone to dirt and damage, and it is much quicker and easier to regild than to clean water gilding, surviving eighteenth-century gilding is extremely rare. In an ideal world, we would prefer to display the cleaned surface with as little compensation as possible. Constraints imposed by the demand for a high degree of finish, and unity among objects displayed together, challenges our desire to simply present historic material. The compensation

issue goes beyond a choice of method and materials. For this mirror frame, it means finding a balance between the current physical reality of the object and the ideals it is expected to convey.

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Bibliography

Adair, W. 1992. Tradition and Innovation. *Picture Framing Magazine* (August):32-39.

Considine, B. 1991. The Gilder's Art in Eighteenth-Century France. In *Gilded Wood: Conservation and History*, ed. D. Bigelow et al. Madison, CT: Sound View Press. 87-98.

de la Rie, R. and C.W. McGinchley. 1990. New Synthetic Resins for Picture Varnishes. In *Cleaning, Retouching and Coatings*, ed. J.W. Mills and P. Smith. London:International Institute of Historic and Artistic Works. 168-173.

Hebard, M. and S. Small. 1991. Experiments in the Use of Polyvinyl Alcohol as a Substitute for Animal Glues in the Conservation of Gilded Wood. In *Gilded Wood: Conservation and History*, ed. D. Bigelow et al. Madison, CT: Sound View Press. 277-290.

Hoven, R. 1992. The Kolner System of Gilding. *Picture Framing Magazine* (August): 68-72.

Serlick, H.S. 1993. An Alternative to Traditional Water Gilding. *Picture Framing Magazine* (August): 38-42.

Thornton, J. 1991. The Use of Nontraditional Gilding Methods and Materials in Conservation. In *Gilded Wood: Conservation and History*, ed. D. Bigelow et al. Madison, CT: Sound View Press. 217-228.

Endnotes

1. Arakawa Chemical (USA) Inc., 625 North Michigan Avenue, Suite 1700, Chicago, IL 60611.



Figure 1. Darnault Mirror Frame, before treatment.



Figure 2. Detail of right side of frame, after cleaning.