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"Preserving a Palimpsest: The History and Treatment of the *Saletta delle Rovine*"

Since 1994 NYU has been the fortunate custodian of a magnificent villa in the Florentine hills, Villa la Pietra, and its extensive art collection. The Conservation Center has played an important role in caring for the collection and this partnership has provided unique opportunities for student conservators to gain treatment experience in Italy and to take part in international collaborations. The conservation treatment of a frescoed room in the villa, the *Saletta delle Rovine*, is one such example. Because of the project's architectural nature, it is important to first situate the villa itself and then discuss the *Saletta* as it relates to the villa.

Villa la Pietra sits in the foothills of the Montughi district to the north of Florence in the hamlet of La Pietra. It is set back from the main road by a long cypress-lined *viale*, giving a stunning approach. La Pietra embodies ideals of the Renaissance villa, with extensive gardens mediating between indoors and out and meticulous landscaping offering dramatic and unexpected vistas in all directions.

The villa is laid out along a central axis, anchored by an interior courtyard. The *Saletta* is located on the ground floor adjacent to the courtyard. It is a small room, about twelve meters square. Within the room are one large window and two doors, which lead into a main corridor on one side and the living rooms on the other.

The cross-vaulted ceiling and all four walls were entirely decorated with frescoes in the mid-eighteenth century. A possible attribution has been suggested to the Florentine painter Anton Domenico Giarré.[1] The *trompe l'oeil* composition consists of a whimsical juxtaposition of classical ruins, from which the *Saletta delle Rovine* derives its name.

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[1] Francesca Baldry, Jean Dommermut and Ellyn Toscano, "The Saletta delle Rovine" *Research and Conservation at Villa la Pietra* 2 (2008).

http://www.nyu.edu/global/lapietra/pdfs/saletta.libretto.pdf

This fanciful setting is peopled with mythological figures, winged putti and more than forty birds. The room echoes the eighteenth century taste for commissioning elegant illusionary spaces, with playful details. On the walls of the *Saletta* the allegorical themes of love, fertility and abundance are emphasized. And the more than forty birds function not only as objects of the hunt, but are depicted with startling accuracy, suggesting a specialized hand at work.

The frescoes were executed in the *bianco di calce* fresco technique, also known as lime painting, with some elements done *a secco*. In true fresco, pigments ground in water are applied onto the freshly laid, damp mortar, known as the *intonaco* layer. In *bianco di calce*, pigments are mixed with a binder of lime putty, which can be applied after the *intonaco* has dried. As a result, *bianco di calce* frescoes differ in color and texture from *buon* fresco painting -- the lime binder gives a longer working time, allowing for a more painterly approach as well as a muted palette, and more body and texture.

In the *Saletta* the artist transferred his composition into the *intonaco* with incisions. Working quickly, he incised only the major architectural lines, and likely applied the base colors, while the plaster was still damp. Smaller details, such as the foliage and the birds were not incised or painted at this stage. Drawings on top of the base colors, as captured in infrared reflectography, indicate that the artist sketched in these details with a dry medium and finished the painting at a more leisurely pace.

The bright colors seen in the birds suggested that these elements were executed *a secco*. Such a vibrant palette is difficult to achieve with true fresco painting, and near impossible with the pastel palette of *bianco di calce*. And in fact, analysis with X-ray fluorescence suggested the presence of pigments that are incompatible with fresco painting, including Egyptian blue, Naples yellow, vermilion and red lead.[2]

A secco painting is notoriously more vulnerable than true fresco, and there were signs of weakening adhesion in the birds. In addition, a few other condition issues first raised concerns about the stability of the frescoes, including flaking in the green foliage, and an overall layer of grime and soot, accumulated over the centuries. But it was a large crack in the wall that prompted the NYU team to consult Daniela Murphy, a Florentine

[2] Melissa Gardner. "*Saletta delle Rovine*: X-ray Fluorescence Report." May 2009.

wall paintings conservator, who concluded that the crack was in fact stable but that other condition issues needed to be addressed to prevent further damage to the frescoes. In assessing the structural stability, she detected several voids in the walls. And she judged that the alarming amount of soluble salts in the region around the window demanded immediate intervention. These puzzling condition issues prompted a closer examination of the room and investigation into past alterations to its structure. In order to understand the evolution of the room to its current appearance, it is necessary to briefly summarize the 700-year history of the villa and situate the *Saletta* within this history.

Sir Harold Acton, the most recent owner of Villa la Pietra who gave it to NYU upon his death in 1994, was fond of referring to the villa as a palimpsest. This is an apt metaphor, as each of the successive owners left his mark on the house.

The earliest known reference to the villa was in 1344, where it was listed as a property with home, curia and farm.[3] These buildings seem to have been incorporated into a larger structure at the end of the fourteenth century and then renovated into a true Renaissance villa in the late fifteenth century by Francesco Sassetti. In 1545 the estate was sold to the Capponi family who carried out many cosmetic renovations over the next three and a half centuries including the baroque façade and the decoration of the *Saletta delle Rovine*—on top of the original fourteenth century vaulting. In 1903 Arthur and Hortense Acton began renting the villa from descendants of the Capponi and bought it in 1907. An avid art collector and amateur dealer and artist, Arthur installed his extensive purchases in the home. The eclectic arrangement of their collection with countless visual puns and surprising juxtapositions is one of the principle charms of the villa. Upon taking ownership, NYU made a resolution to maintain the villa as it was during the Acton era, retaining the arrangement of the collection and the decoration of the interior. The treatment of the *Saletta* has been an ongoing project since 2006 and ten students have participated in this treatment over the years under the supervision of NYU faculty member Jean Dommermuth and fresco consultant Daniela Murphy, as well as numerous Florentine and American collaborators.

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[3] Amanda Lillie, *Florentine Villas in the Fifteenth Century: An Architectural and Social History* (Cambridge and New York: Cambridge University Press, 2005), 181.

The first step of treatment was to identify the sources of the current condition issues. The most pressing issue lay in the window surround, specifically the task of identifying the source of the soluble salts, removing the remaining salts and formulating a plan to re-integrate the damaged area into the intact composition. This was complicated by the fact that the current window was not part of the original design of the *Saletta*.

The incongruity of the decoration of this wall is quickly apparent. The window cuts through elements of architecture in an odd fashion. Closer inspection of the play of light in the room indicates that the artist integrated the daylight entering through the window into his *trompe l'oeil* composition: a cast shadow was painted onto the wall as the light would have struck it. But the shadow does not align with the current window. The angle would have been correct with a higher placed window. And a thermal imaging study of the fabric of the room found that a small window was once located higher up on the opposite wall.[4] There are examples of similar windows elsewhere in the home and such a window would make sense within the painted composition. This Photoshop® reconstruction hypothesizes the dimensions and position of the window based on these studies. The fresco decoration is pure conjecture, but it seems likely that the window would have been framed and integrated into the architectural surrounds.

The history of the villa provides more clues about the installation of the current, larger window. In 1881 the Capponi decided to transform the central courtyard into an elegant, enclosed space with a grand staircase. Comparison to the open courtyard at another Florentine Renaissance villa, the Palazzo Medici, gives a sense of the change in atmospheric lighting that resulted. Enclosing the courtyard would have limited the light entering the *Saletta* through this small window, and installing a larger window may have augmented the amount of natural daylight. However, this renovation damaged the surrounding wall, requiring new mortar patches. Unfortunately large amounts of Portland cement, a notorious source of soluble salts, were used in the work, explaining the condition issues in this area. At this point thick casein-based overpaint was applied to integrate the new cement fills into the existing fresco.

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[4] Thermography Investigation , February 1999 survey and September 1999 survey, Villa La Pietra, Editech S.rl Art and Architecture Diagnostic Center, Via dei Bardi, 28, 50125 Florence Italy.

Examination and treatment of this window surround prompted further examination of the condition and history of the rest of the room. In the nineteenth century, possibly at the same time as the window renovation, the entire room received a layer of animal glue as a varnish and possibly a consolidant. UV images indicate the remarkable amount of glue present, as seen in this splash on the wall, seemingly an accident during application. The glue has since darkened and discolored, disturbing the delicate balance of the pastel colors.

The treatment plan was also complicated by the multiple campaigns of repainting in the *zoccolo*, the painted baseboard. *Zoccoli* are common design elements in indoor frescoed rooms, functioning as a less visually important zone between the main design and the floor, where much of the daily wear and tear occurs in a house. Frequently damaged, *zoccoli* are typically repainted periodically. Technical examination indicated that the original *zoccolo* in the *Saletta* was painted anew at least three times. The repainting was executed with a lime wash, with warmer tones and in a slightly simpler style than the original. At this point the animal glue was washed over the entire *zoccolo*, at the same time that the entire room was varnished. This can be seen best in UV. This layer, with the glue coating would have been visible during the Acton era. The final layer of acrylic paint was applied during the repainting of the floor between 1998 and 2002. Not sympathetic with the frescoes above and post-dating the Acton era, it became clear that this most recent overpaint must be removed, but the possible fragmentary condition of the underlying layers was not known, and it was likely that some compensation would be necessary.

Examination and historical research emphasized that the changes to the *Saletta* are an important part of its history. Treatment decisions must enable the aesthetic appreciation of the frescoes while preserving the important historical evidence.

Treatment commenced in 2006 with those two sometimes contradictory goals in mind. Each summer from 2006 to 2009, the consolidation and cleaning of one wall was

addressed by a team of two students from NYU.[5] Sophie and I took part in the 2011 season for the final cleaning steps and compensation.

Three separate condition issues required different methods for consolidation. First, the flaking of paint, which occurred primarily in passages of greens, was stabilized locally by injecting an adhesive of barium caseinate[6] with a syringe behind each flake. This weak caseinate suspension proved strong enough to hold flakes in place during cleaning. In areas where the *intonaco* and *arriccio* layers had become detached from one another, PLM hydraulic lime was injected through small tubes. The acronym, "PLM" stands for Paulo and Laura Mora, the conservators who developed and patented this adhesive. The team was responsible for numerous other innovations in the modern treatment of wall paintings. Tubes were inserted through preexisting cracks or losses to avoid further damage. In larger structural voids in the walls, mortar was used as a third consolidant.[7]

Several methods of cleaning were also required. Unwanted materials included glue with embedded dirt and grime, unstable gypsum fills, soluble salts and overpaints. The first three of these needed to be removed to preserve the paintings. The accumulated dirt and animal glue was swelled by repeatedly applying deionized water to large areas through Japanese tissue.[8] The areas were then sponged gently to remove residual material. This step restored the original palette of the *bianco di calce.*

The Portland cement around the window and the gypsum fills were sources of soluble salts and thus a cause of deterioration. These fills were removed mechanically. Salt extracting poultices were used on areas of original mortar stained by these migrating

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[5] More extensive information and accompanying diagrams from each treatment season from 2006 to 2009 can be found in chapter 7 of the project documentation assembled by Daniela Murphy Corella, on file at Villa la Pietra.

[6] The adhesive is a 1:1:1 ratio of 6% barium hydroxide, lime water, and skimmed milk.

[7] Mortar was composed of lime and sand. For the *arriccio layer* sand and lime were mixed in a 3:1 ratio and for the *intonaco,* a 1:1 ratio. Sand is river sand that is washed and sieved. Larger grained sand is used for the *arriccio*, the finer for the *intonaco.* Personal communication, Daniela Murphy, April 9, 2012.

[8] Japanese tissue 502 was used for this cleaning process and was left in place for a dwell time of 30 minutes. *A secco* colors were cleaned in the same way, but were dabbed with natural sponges through Japanese tissue to guarantee the stability of the color. Contact time was reduced to 5 minutes.

salts. Poultices of water and paper cellulose or arbocel® were applied repeatedly until salt levels were minimal.[9] For areas of significant salt staining, a further poultice of saturated ammonium carbonate with cellulose was applied to areas prepared with Japanese tissue.[10] This step greatly reduced the staining.

The final cleaning step, the removal of overpaint, required much more consideration. When the window was enlarged in the nineteenth century, caseinate paint had been applied to cover the now isolated architectural fragments with sky. It was decided to remove this overpaint to reveal the original *trompe l'oeil* element. Luckily, at the time it was applied, the original paint surface was dirty, thus providing a barrier between the two paint layers. A dilute ammonia solution in water[11] was used to swell the dirt layer, and the repaint was mechanically removed with a brush. The incongruous acrylic paint covering the *zoccolo* was removed with a solution of acetone and water applied through Japanese tissue to swell the paint. The overpaint was then removed with cotton and acetone.[12]

In the summer of 2011, a decision still needed to be made regarding possible further cleaning of the *zoccolo*. Previous cleaning tests showed that the original eighteenth century *zoccolo* was still largely intact under the nineteenth century. Before treatment resumed, representatives of the *Soprintendenza* and of the Acton Collection, and conservators, Daniela Murphy and Jean Dommermuth met to decide which version of *zoccolo* to preserve, the eighteenth century or the nineteenth century. Such international dialogs have occurred during all steps of the *Saletta's* treatment. These discussions are not only helpful in that many different opinions are represented, but are mandatory as Villa La Pietra is considered Italian national cultural heritage.

In the case of the *zoccolo*, three options were presented after the contemporary acrylic layer had been removed. In this discussion, the larger question of 'what is the work of art?' was debated. The nineteenth century overpaint could be entirely removed to reveal the eighteenth century *zoccolo*, which remained largely intact underneath. The

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[9] Poultices were left in place for a dwell time of 2 to 3 weeks.
[10] Poultices were left in place for a dwell time of 4 hours.
[11] The solution was a ~2% concentration of ammonium in water.
[12] Acetone and water were mixed in a 1:1 solution. The solution was left for a dwell time of 10 minutes.

eighteenth century *zoccolo* was part of the original *Saletta's* design. To maintain the wholeness of the original work, this version should be revealed. However, removing the nineteenth century *zoccolo* would erase this historical version of the room forever. Leaving the nineteenth century overpaint would preserve the appearance of the room in the Acton era, which is NYU's mission to preserve. If the palimpsest of the villa in the Acton era was determined to be the work of art, the nineteenth century *zoccolo* should be maintained. A final option would be a compromise in which parts of each version could be exposed and retained to preserve both historical phases of the room. While the compromise option conflicted with both the ideas of wholeness and historicity, the final decision, ideal for no one, but ultimately acceptable to all, was to leave the nineteenth century repaint on the isolated wall but to remove it from the *zoccolo* of the three contiguous walls.

This was achieved mechanically by tapping the wall gently with a hammer to cause vibrations that would disturb the cohesion between paint layers and allow the upper layer to gently flake away.

In the summer of 2010, the retouching phase of the treatment began.[13] Just as with overpaint removal, compensation choices had to balance sometimes conflicting ideas. In contemporary American easel painting conservation, the goal of compensation is to reconstruct and invisibly integrate losses into the surrounding painted surface. The compensation philosophy of Italian wall painting conservation, however, is based on a different set of assumptions. In Italy, compensation is strictly limited and must be clearly distinguishable from the original. In current Florentine practice, two methods of retouching are employed on wall paintings: *selezione cromatica*, and *velatura* or "glazing" *sotto tono.* S*elezione cromatica* is a highly controlled technique in which distinct linear brushstrokes are applied in a limited number of colors. This technique is appropriate for a smooth, delicately painted surface such as a fourteenth century fresco. However, the *selezione* method does not harmonize with the rougher, grainier surface and the painterly character of *bianco di calce* frescoes.

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[13] Information on compensation decision-making is from Jean Dommermuth, "*Saletta delle Rovine*: Retouching Proposal," 2010.

Instead of *selezione*, the method of *velatura* or *sotto tono* was a better choice for the compensation of the *Saletta*. In this technique, thin washes of color are applied in layers in what Mora, Mora and Philippot describe as "a tone of the exact value but very slightly lighter and cooler than the original. This tone may even be grayish and will give the impression of being a trace of the original color on the rendering."[14] Retouching with a palette of reduced saturation gives the appearance that the compensation is situated either at the exact level or slightly behind the original, but never overpowering it. This method does not violate the three criteria for retouching as defined by Florentine wall painting restorer, Ornella Casazza, "First it cannot be competitive. Second it cannot be imitative. And third, it cannot be a falsification."[15] In the retouching of the *Saletta*, the *sotto tono* technique is used with a limited palette of pigments dispersed in an ammonium caseinate binder.

The *sotto tono* method is ideal for small areas of loss throughout the pictorial space of the walls. In greater areas of loss in decorative elements, such as the *zoccolo*, the Moras and Philippot deem a greater amount of reconstruction allowable. The structure of such elements can be easily continued with no need for creation. In the *Saletta*, such reconstructions are carried out in larger areas of loss and over newly introduced mortar fills.

Previous to the 2011 treatment season, a lengthy discussion had been held with the representative of the *Soprintendenza* regarding the compensation to be carried out in the area of the window. Large areas of the original design had been destroyed when the window was enlarged. This larger window had then been surrounded by Portland cement, which was removed during this treatment. It was replaced with mortar of lime and sand. But when it came to impainting on top of this fill, there was no obvious solution, so several options were discussed at length.

Reinstating the eighteenth century window was an impractical solution. Even if it were possible, reconstructing the pictorial space now occupied by the larger window would be pure conjecture.

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[14] Mora, Mora and Philippot, *The Conservation of Wall Paintings* (Boston: Butterworths, 1984), 307.

[15] Ken Shulman, *Anatomy of a Restoration*: *The Brancacci Chapel* (New York: Walker, 1991), 207, as quoted in Dommermuth, 2010, 4.

Another option would be to use a neutral tone to retouch the area around the window. This choice was discarded for two reasons. During the Acton era, a curtain had been hung over the window and it will be returned once the treatment is complete. With the curtain in place, the neutral toned fill extends awkwardly beyond it and disrupts the *trompe l'oeil* effect of the room.

Another option was to preserve the window surround as it would have appeared in the Acton era. This strategy would involve repainting over the architectural elements above the window leaving them as pentimenti and recreating a tidier version of what the Acton's would have seen. This option was also discarded as it was considered inappropriate to repaint over the original eighteenth century design.

As with overpaint removal, a compromise was ultimately reached. Much of the eighteenth century architecture would be continued where it would be visible outside the curtain. A simple cornice would be created around the current window to isolate it from the original fresco. In this solution, the nineteenth century renovation was acknowledged while retaining as much of the eighteenth century *trompe l'oeil* painted design as possible.

Work on the retouching phase of the *Saletta* will continue this summer. In all, twelve NYU students will have participated in this international collaboration and experienced the unique challenge of conserving a wall painting. Thank you.

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