



CHAPTER 15

The Process of Change in the Brumidi Corridors

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The ornate decoration of the Brumidi Corridors has long dazzled visitors in its sheer complexity. The variety of motifs and the masterly compositions are tributes to Brumidi's skill and experience as an artist, historian, and designer (fig. 15-1). Yet, despite the years and highly skilled labor that Brumidi and his assistants devoted to its execution, the decoration that resulted appeared at best only extremely elaborate. We found it puzzling that the high quality of Brumidi's execution technique elsewhere was not evident throughout the corridor decoration, and that close-up, the minute details of the decoration appeared crude and awkwardly painted in muddy and inharmonious colors. The meticulous skill and craftsmanship that might be expected in the painting of such an important decoration were mysteriously absent. In examining and testing many of the painted images very closely, we concluded that the uppermost layer of paint we

Fig. 15-1. Main Corridor at North Entry before conservation of the walls. *Over time, repainting of the walls obscured the light backgrounds, vivid colors, and delicate details, and the harmony with the ceiling vaults was lost.*

Photo: Cunningham-Adams.



Fig. 15-2. Test removal of overpaint. *In comparison with the overpainted areas, the original painting is higher in quality, with the details of the black-headed grosbeak and vine delicately and accurately painted on a white background.*

Photo: Cunningham-Adams.

were looking at was not the original but extensive inexpert repainting (fig. 15-2). We discussed our suspicions with Barbara Wolanin, Curator for the Architect of the Capitol, and were subsequently contracted by that office in 1993 to undertake a one-year technical study of the corridor decoration.

The 1993 study confirmed that the unsettling qualities that distract from the extraordinary beauty of the Brumidi Corridors are the result of changes made subsequent to their creation (fig. 15-3). We discovered that the original paintings lay essentially intact buried under repainted layers,

that they are of extraordinary beauty and executed in a rare and sophisticated technique, and that they can be recovered by removal of the overpaint (fig. 15-4). We arrived at these conclusions by working backwards through time. Beginning with the topmost layer, and analyzing and removing layer by layer until we reached the original, we were able to reconstruct what had happened to the decorations.

Apparently by accident and misunderstanding, the overpaint introduced changes that destroyed both the details and the original sweeping integrity of the design. Other changes in execution medium and lighting compounded the disruption. In the course of our study of the corridors, we used techniques such as laboratory analysis



Fig. 15-3. Section of the North Corridor. *Overpainting over the years darkened and coarsened the original decoration of the walls, leaving the borders a murky green and the background fields yellow.*

Photo: Cunningham-Adams.

of execution medium and pigment types; infrared and ultraviolet fluorescence photography; reflectance spectrophotometry; archival research, including photographs preserved in the Curator's Office; and long and frequent discussions with Capitol personnel familiar with the recent maintenance of the building. But the most important tools were frequent reflection on, and discussion of, the import of each new clue we found. The windows we opened through the overpaint at carefully selected sites confirmed, in context, the hypotheses we were continually refining. Our study also revealed a great deal about the process of change, which proved to be a coherent tale in which each little step was reasonable by itself, but which led more or less steadily away from the original scheme at a quickening pace.

At the curator's request, we devised a restoration plan that will restore the corridors' original aesthetic character and safeguard them from future transformation through the use of techniques such as reflectance spectrophotometry. The restoration plan was approved by Congress, and

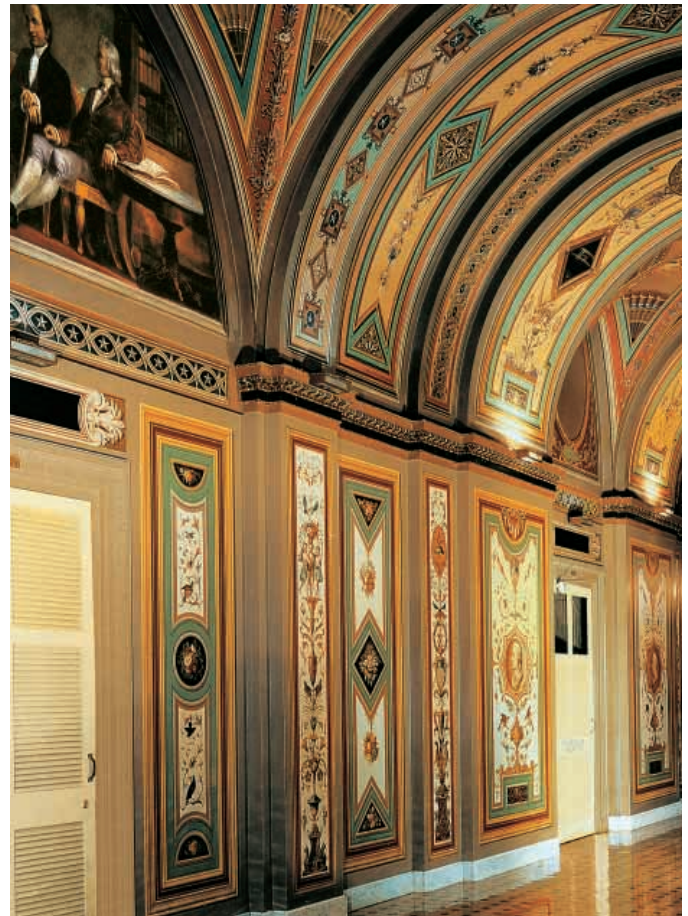


Fig. 15-4. Section of the North Corridor with computer enhancement. *A computer-generated image predicts the appearance of the corridor when returned to its original colors. Note the airiness of the light panel backgrounds, the suggestion of stone structure in the walls, and the visual unity of wall and ceiling.*

Photo: Cunningham-Adams.

the ten-year project was begun with a pilot phase funded for 1996. In the initial phase of the project, the large sections of original surface that were uncovered fulfilled the promise of our research (fig. 15-5) and provided the final confirmation of our hypothesis of the process of change. The metamorphosis we had slowly unraveled proved to be an exemplary case study of the gradual transformation sometimes imposed on a work of art that can camouflage the artist's intent and take the art out of its proper place in time and art history.

Change in Palette

The process of change in the Brumidi corridors started with a shift of palette toward yellow and brown. It is apparent that since they were originally painted between 1857 and 1859, the wall paintings, which are the most vulnerable to constant damage, have been worked on many times. In addition to the repair of numerous



Fig. 15–5. Patent Corridor with two conserved panels.

Exposure of the first large sections of original paint layers in the initial phase of the corridor restoration produced bright, limpid colors that dramatically contrast with the untreated panel to the right.

Photo: Cunningham-Adams.

scratches, nicks, and gouges, it appears that approximately every twenty years, instead of being cleaned of accumulated dirt, the murals were repainted to freshen them up. With newly dirtied colors matched in each new repainting, the palette gradually darkened. Brumidi's own restoration of the wall paintings in 1861 may have been the first of the six major restoration treatments we identified. In the first two treatments, the paintings were retouched in color, technique, and style very similar to those of the original. As time distanced restorers from the original execution, however, understanding of the original intent was lost and distortions were introduced. With time, the drift accelerated as the two important constraints against change were diminished. One was memory of the original scheme, which faded with time and changes in personnel. The other constraint lost was the understanding of the harmony and traditional meaning of the entire original classical scheme. As the colors of the walls were shifted away from the colors of the ceilings toward darker browns, the original relationship between the

walls and ceilings became obscured. Because of discolored varnish and/or changes in taste, green was introduced into the wall panel surrounds, further weakening this unity and increasing the likelihood of further change. By the 1960s, the unity of the corridors had been so obscured that a new lighting system was designed to illuminate the ceilings as separate visual entities from the walls, creating a sharp division at the top of the cornice molding. Not long after that, the cornice molding was painted with darker colors to match the walls.

The change in the walls is far greater than the change in the ceilings, because the walls were more subject to damage and thus were more frequently overpainted. However, although the ceilings have only a thin layer of overpaint, and some original work remains visible, the color of the overpaint was chosen to match discolored varnish on the walls, so that the overall palette of the ceilings is also substantially altered.

The history of this evolution can be seen in the paint stratigraphy. The *scala* (a graduated exposure revealing the



Fig. 15-6. Test window showing the gradual color shift in overpaint. This scala through layers of overpaint at the edge of the *trompe l'oeil* molding shows nine major paint layers. They shift from the lowest, original, layer of stony light gray to muddy green.
Photo: Cunningham-Adams.

paint layers step by step) (fig. 15-6) confirms what one would expect: there was no sudden, dramatic change of color, but rather a gradual process of drift, which varied in different areas. For example, in the northern end of the Main Corridor, the wall panel surrounds are presently a chocolate color. Visually, this region now seems utterly unconnected to the adjacent North Corridor, but it originally had the same colors as the North and West Corridors.

The colors found in the original decorations (such as the Pompeian red and sapphire blue) are, not surprisingly, the same as those found in the ancient Roman murals that inspired Brumidi, and they are also found in the Minton floor tiles. The light gray borders of the wall panels originally suggested carved stone moldings. As the palette drifted, it lost its meaning within the traditional decorative vocabulary. For example, the original blue fields have become dark green, through the yellowing of varnish over time or from repainting to match the yellowed varnish, effectively disconnecting these areas visually from the blue in the floor tiles, and the light gray borders have become pea green.

Yellow overpainting in the panel background fields encroached on the outlines of the birds and animals, obscuring their original accurate details. In some areas, the figures have been completely repainted.

Execution Techniques

Brumidi's original choice of execution technique was just as important to his intended effect as his choice of colors. Our study showed that he chose three particular techniques to create the combined effect he desired in the corridors. Each was selected for the texture, color absorption, and reflectance it would produce, and for its effect in concert with the other two techniques. The concealment of these effects with overpainting had done much to reduce the decoration's original quality.

Brumidi used primarily three different execution techniques on the walls and ceilings in the Senate corridors. First, the lunettes that Brumidi painted himself were executed in *buon fresco*, in which pigments moistened with water are applied to wet mortar and become incorporated

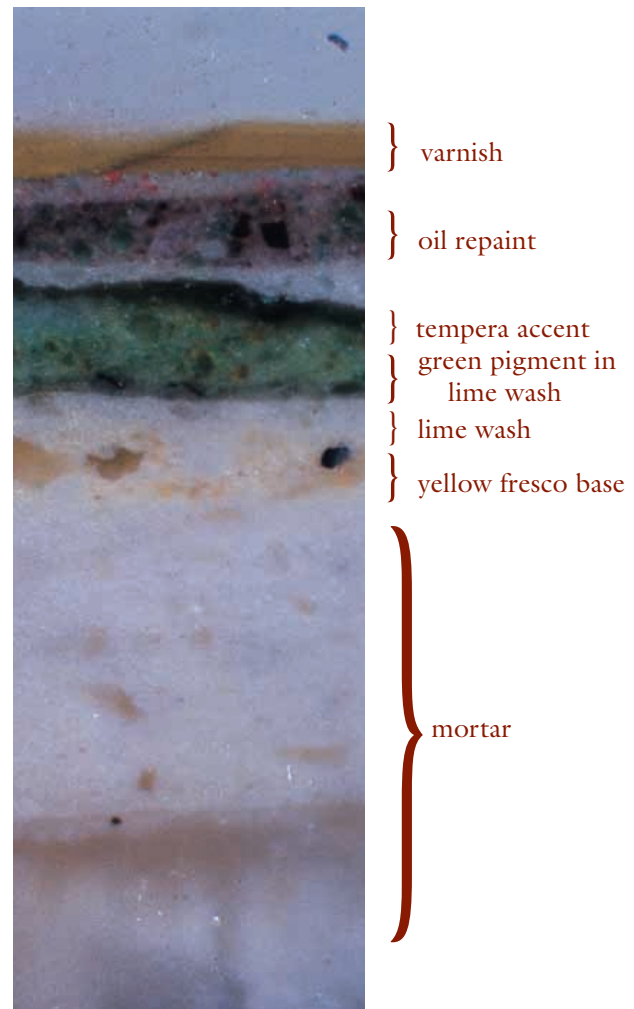


Fig. 15-7. Sample taken from a panel detail seen through a microscope. This photomicrograph shows the layers of mortar, lime wash fresco, and accent color, surmounted by several layers of repaint and heavy, yellow-tinted varnish.

Photo: Ulderico Santa Maria and Cooperativa Punta Terra.

in the mortar as it cures, leaving the texture of the rough mortar visible. The corridor ceilings were executed in tempera, a paint formed of pigments mixed in a water-soluble binding medium such as glue or gum. The surface of the tempera painting has a somewhat chalky, velvet appearance that adds the appearance of depth to the painting and looks similar to fresco from a distance. A third technique we discovered in our study is the relatively rare *fresco in scialbatura*, or lime wash fresco technique. The corridor walls, erroneously thought to have been painted originally in oil, are primarily executed in this fresco technique, in which successive layers of pigment were applied to lime washes brushed onto the surface of fresh mortar (fig. 15–7). The resulting effect is a crystalline structure with the slightly transparent appearance of a smooth, colored stone. The matte surface enhances the illusion of three-dimensionality. In some places, the pale, transparent colors of some details were heightened and intensified by the addition of tempera over the surface of the *fresco in scialbatura*. It is not possible to prove absolutely whether these additions were part of the original painting technique or part of an early restoration.

Since the turn of the century, all of the repainting of the corridor has been done in oil. The effect of this medium, especially when covered by the yellowing varnish applied for protection, is to distort colors and create a high gloss that weakens the effectiveness of the original trompe l’oeil with its softly painted shadows. Heavy layers of varnish further flatten the three-dimensional illusion, which makes some visitors believe they are looking at wallpaper.

Stylistic Drift

Finally, a change in painting technique led to a change in style. The original trompe l’oeil was painted freehand, giving it a softness and vitality of appearance that was complementary to the soft texture of the original medium and the soft, limpid colors of the original palette. The trompe l’oeil moldings presently visible, however, have largely been painted with edge guides or with masking tape. Although the difference is subtle, the effect is great. The human eye is very sensitive to sharp lines, and the sharp lines of the present trompe l’oeil distract the eye and weaken the appearance of the other decoration. At the same time, the delicate shading used to create the illusion of depth in the original trompe l’oeil has been coarsened, partly as an inevitable result of this change in technique. Combined with the effect of the change in medium from lime wash fresco to oil, this coarsening greatly flattened the appearance of the wall. In all of the test windows we opened, a marked shift in the propor-



Fig. 15–8. Panel in main corridor with early test windows.
The discovery of the much lighter colors and delicate details showed the value of uncovering Brumidi’s original designs.

Photo: Cunningham-Adams.

tions of the trompe l’oeil molding components is visible. Removal of the overpaint in layers revealed that the shift came about gradually, each new layer of overpaint deviating only slightly from the layer before it.

In the course of the changes in palette, medium, and painting technique, the liveliness of the ancient Roman and Renaissance design became leaden, as elements were rigidly replicated without understanding of their original reference and so were robbed of their original decorative spirit. The magnitude of the changes that have occurred over the years can be directly seen by comparing the present appearance with the original work that lies beneath (fig. 15–8). The process of change began as the white (now yellow) central field was repainted, at first with some pains to avoid overpainting the decorative flora and fauna. But here and there, the overpaint encroached onto the detail so that, over time, overpainting of the entire decorative element became necessary.



Fig. 15–9. Comparison of overpainted acanthus leaves. *In the corridors, the acanthus leaves range from three-dimensional forms that appear to be growing (left) to crude and flat outlines resulting from heavy-handed overpainting.*

Photo: Cunningham-Adams.

On the overpainted surfaces, the stylistic drift can be seen in samples of acanthus, which appear frequently in the corridors. The drift is so conspicuous throughout the Senate wing that the painted acanthus leaves can be used as an indicator of the amount of change that has occurred in any section of the hallways since that section was first painted (fig. 15–9).

A study of the birds of the Brumidi Corridors also offers insight into changes in the decorative scheme because each was intended to portray accurately a creature whose actual appearance is known to us. The birds obviously were painted with skill and with the intent to be faithful to nature; therefore, even though painted by different hands and at different times, they can be used to measure the degree of stylistic change. The corridors can be seen as an ecosystem in which the natural processes of evolution, interbreeding, and genetic leaps

remain active as a result of overpainting. Generally the birds show a tendency toward the appearance of their corridor neighbors, as if by cross-species interbreeding; natural forces seem to encourage shrinking and coarsening of appendages and outline; occasionally a grand mutation occurs. Just as DNA divergence forms a measure of evolutionary distance, the divergence of these birds from their natural models forms a good measure of the degree of overpainting that has been applied to them and probably, therefore, to the surrounding decoration (fig. 15–10). In the first phase of the restoration in 1996, panels decorated with daisies and roses were restored to reveal a wide variety of more colorful flowers such as hydrangea, poppies, hibiscus, and morning glories; the daisies and roses painted over them in the 1930s repainting reflect the American tastes of that period (fig. 15–11).



Fig. 15–10. Varied conditions of overpainted birds. *The original birds of the corridors, such as the blue macaw at left, were painted with the accuracy of good ornithological illustration of the period. In areas subject to damage, birds have “mutated” through repainting. The belted kingfisher, for example, has lost its distinctive crest and gained a sparrow’s tail.*

Photo: Cunningham-Adams.



Fig. 15–11. Details of floral panel before and after conservation. *The heavy oil overpainting of the uppermost layer (left) showed stiff, leaden flowers of unspecific character. Underneath them were found delicate and brilliant morning glories, poppies, and hibiscus (right) on the original paint layer, which needed only minor repair.*

Photo: Cunningham-Adams.

Lighting

In the course of time, at least two major renovations of the corridor lighting system were made. The first was the introduction of electric lighting; the second was a renovation of the electrical system the 1960s, a period when reflected lighting was gaining popularity. These changes were undoubtedly necessary, and they achieved appropriate overall light levels. But they brought with them some unfortunate results—in particular, a large imbalance between the illumination of the ceiling and the illumination of the walls (fig. 15–12). This imbalance severely disrupts the original visual unity of the ceilings and walls and makes the cornice a harsh dividing line between the surfaces, compounding the effect of the changes in palette and execution medium on the walls.

This imbalance was almost certainly not present with the original gas lighting system. When it was replaced with electric lighting, the fixtures on the cornices of the Patent, North, and West Corridors were simply bare bulbs in pairs and triplets at an angle above the horizontal. Although not aesthetically desirable, such fixtures would have resulted in fairly even distribution of light in a transverse vertical plane and much less contrast between the walls and ceilings, as confirmed by photographs from the 1950s.

Before the present fixtures were installed in the 1960s, the Central Corridor was lit with small glass globes at the groins. Although this lighting system had a number of disadvantages compared to the present system, it is interesting to note how clean the vista appears in early photos without the disruption of the present chandeliers.

Conclusion

The study of the corridors strengthened our belief in some philosophical precepts in conservation analysis of wall paintings. One is trust that the artist will have considered and incorporated all the elements of the environment in his design, so that lighting and execution medium are as important to the final effect as subject matter or palette. Each element in a complex such as the Brumidi Corridors must be examined in light of an understanding of the whole. Conservation and historical judgments cannot be made on the basis of personal or contemporary taste. One must trust that the original was aesthetically satisfying. We began the study with respect for Brumidi and an expectation of finding excellence. We were surprised only that the genius and integrity of the corridor design were so much greater even than we expected, and that so many new riches can continually be found in his work.

Fig. 15–12. Effect of modern lighting. *The light reflecting ten times brighter on the ceiling of the corridors than on the walls exaggerates the visual separation of the two elements.*

