

Restoring the colors of Thomas Jefferson: beyond the colors of independence

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Abstract Over the past 30 years a vast amount of historic paint and wallpaper evidence from the Capitol of Virginia, Monticello and the University of Virginia has been studied and analyzed. The restored color palette and finishes of these buildings differ from the traditional English Georgian style of the period and show the influence of French design on Thomas Jefferson's aesthetic. Jefferson's palette consisted of an extensive use of white on trim and plaster. Most shutters were dark green. Sand painting imitated stone on columns and rusticated siding. Doors were grained to imitate naturally finished mahogany, whereas real mahogany window sashes were naturally finished. Yellow calcimine decorated the walls of two rooms at Monticello and pine floors were painted grass green. In addition, a significant amount of wall color at Monticello came from wallpapers that Jefferson ordered from Paris, further showing his preference for French design.

Keywords historic paint colors, mahogany graining, sand-painting, French wallpapers, microanalysis, pigments, Munsell color system

Introduction

Thomas Jefferson, author of the Declaration of Independence, Minister to France, Governor of Virginia and third President of the United States, was among the most influential political leaders of his time. He was also an architect and his designs for Monticello (1809), the Capitol of Virginia (1789) and the University of Virginia (1817–26) were inspired by a deep appreciation of classical architecture, which he acquired from extensive study of books on architecture augmented with first-hand experience during his time in France (1784–89). Born and raised in mid-18th century Virginia, it is remarkable how his choice of colors and designs shows the influence of the classicism of the ancient world as it was being interpreted in contemporary France rather than the English Georgian style and color palette with which he grew up. Jefferson was familiar with Wythe House and Gunston Hall in Virginia and the Pennsylvania State House (Independence Hall) in Philadelphia but he moved beyond the time and colors of independence into a new age that continues to inspire us today.

Over the past 30 years, numerous documents as well as a vast amount of historic paint and wallpaper from Monticello, the Capitol and University have been collected, studied and analyzed. The restored color palette and finishes demonstrate the design and color preferences of a unique individual who influenced the course and direction not only of American history but also its architectural heritage.

Color is one of the most important elements in architecture. Restoring authentic colors to historic buildings brings them back to life. Paint color research was once a matter of guesswork based upon the crude scraping of a surface down

through the painted layers to find colors to match. Today, it is a scientific discipline recognized in fine restoration projects all over the world.

Documentary evidence indicates that Jefferson was intimately involved in the selection of paint finishes, colors and wallpapers. This historic color evidence on the buildings has been investigated, sampled and collected from painted exterior and interior wood and plaster surfaces from Monticello, the Capitol, selected pavilions at the University of Virginia and Poplar Forest, an octagonal house in Lynchburg that Jefferson built after completing Monticello. Unfortunately, Poplar Forest was almost totally destroyed by fire in the 1840s and, although it is being restored now, there is woefully little paint evidence to study. What has been found vaguely suggests that the trim, like that of all his other buildings, was painted white.

The collected samples have been microscopically analyzed to determine the original color and composition, including pigments used in the paints and fibers used in the papers. All of the Jefferson period paints and finishes were evaluated, color matched and referenced to the Munsell color system. This 30-year effort of paint archeology and laboratory analyses reveals significant information about Jefferson's color preferences.

He rejected the strong blues, ochres, grays and greens that dominated the Georgian color scheme in mid-to-late 18th-century America. Instead, he developed and adopted a new palette strongly influenced by what he saw and studied during his time in France; while there, he commissioned the construction of a model for the Capitol of Virginia and upon his return contributed to its construction until its completion in the 1790s. At the same time, he completely redesigned



Figure 1 Independence Hall, Philadelphia, Pennsylvania: the Long Gallery's original mid-18th century colors restored. The blue color on trim was made with white lead and Prussian blue.

Monticello, completing it in 1806, and started construction of Poplar Forest. All these buildings incorporated sophisticated ideas brought back from Europe. By 1820, he initiated the construction of the University of Virginia and witnessed most of its development until he died on July 4, 1826, just two months before its completion.

As Jefferson discarded the colors of independence, he embraced a palette that featured white as the primary color for use not only on wood trim but also on plaster. He used stunning colors, such as yellow and green, and imitative, decorative and clear-coat finishes such as sand painting, mahogany graining and varnished mahogany in addition to colorful patterned and plain French wallpapers with borders to accent and embellish his distinctly individual palette.

Virginia State Capitol

The restoration of the Capitol building in Richmond offered the most recent opportunity to study the earliest colors used by Jefferson, especially those related to a monumental interior. Unfortunately, a substantial amount of wood trim and virtually all plaster was removed during a complete remodeling and expansion of the building in 1906. The original wood trim survives only in the old House and Senate Chambers and domed Rotunda. Even though the paints in these areas were stripped by burning with an open flame, full paint layering was found intact in each space on balusters, cornices and the monumental doorway's dentil moldings. The same color of white, semi-gloss oil paint, made with white lead and tinted with small amounts of natural iron earth pigments was used originally on all trim. No doors survive so there is no evidence to analyze, however, a watercolor by Goodacre from the 1830s suggests the doors may have been grained to look like mahogany, a technique Jefferson used at Monticello and the University of Virginia.

During the recent restoration, one area of original plaster wainscot was not removed from a space on the second floor. It exhibited numerous layers of white lime whitewash, which is consistent with coloration and material most often found on walls in public buildings of the period. Even though only these tiny fragments survive, they provide evidence of the coloration of the interior of the Capitol during its earliest years, but because the early 20th-century renovations so altered Jefferson's original building, the recent restoration interprets that period rather than the 1790s.

Monticello

Jefferson decided to build Monticello, his mountaintop home, in 1762 but the remodeled building of 1793–1809 clearly reflects his years in France. The house was sold after his death in 1826 and restored in the mid-20th century under the direction of Charlottesville architect Milton Grigg. At that time, little or no attention was given to historic finishes. It was not until the mid-1970s that any interest was shown in Jefferson period colors and finishes. Research, analyses and restoration have continued since then, with most work completed in the 1980s and 1990s.

In contrast to the Capitol, virtually all of the original building fabric remains and there is substantial documentary evidence. For example, we know what paint materials Jefferson used because he kept a record of pigments, linseed oil, copal varnish and gold leaf that he purchased. Not surprisingly the pigments included more than two thousand pounds of white lead, hundreds of pounds of Spanish brown and much smaller amounts of ochres, umbers and other tinting pigments. As at the Capitol, all of the wood trim at Monticello was painted with white, lead-based oil paint that was slightly tinted with small amounts of iron earth pigments. Over the years, only limited amounts of paint have been removed, however, all



Figure 2 Monticello (completed 1806): west front.



Figure 3 Monticello: east (carriage) front showing restored white on trim, sand paint on columns and rustication, and mahogany window sashes.

of the original wallpapers were stripped from the walls long ago. Consequently, paint evidence is extensive but wallpaper evidence is meager to non-existent. An original order placed with his agent in Paris survives among Jefferson's papers. He ordered numerous patterns with associated borders – one a plain blue and another a brick pattern. Coincidentally, architect Milton Grigg not only discovered the ghosting of one of the papers, a trellis pattern, on one of the plaster walls in the first floor's North Octagonal bedroom, but he also located a fragment of the same patterned wallpaper at Colonial Williamsburg where he previously worked. The whereabouts of the associated border is unknown. The Williamsburg paper was recently microanalyzed to evaluate the original colors, then reproduced and reinstalled in the bedroom. No other

Jefferson-period wallpaper evidence has been found so we do not know which rooms were papered but assume most of the first-floor private rooms and, possibly, the Dining Room would have been decorated in this way.

The most stunning use of color on walls is found on the wainscot of the entrance hall and also on the walls of the octagonal Dome Room on the third floor. Jefferson used a bright, clean yellow ochre-colored calcimine paint in conjunction with white on other plaster surfaces and ceilings in this room. After analysis of the paint composition, the yellow in the Dome Room was restored using authentically formulated calcimine paint, tinted with yellow ochre.

In both the entrance hall and the Dome Room, Jefferson painted the pine floors with what he referred to as a grass



Figure 4 Monticello: fragment of trellis wallpaper used for reproduction on an installation in the North Octagonal bedroom.

green color made with Prussian blue and yellow ochre, a color personally recommended by Charles Wilson Peale, the renowned portraitist. Even though both floors were stripped in the mid-20th century, evidence of the green paint survives. In the entrance hall, a medium grayish-blue painted on the vertical face of the baseboards complements these colors. All these colors and finishes have been restored, but rather than paint the floors green, large sheets of battleship linoleum were laid down and painted in order to provide a renewable surface.

Jefferson loved mahogany. He had a mahogany piano. He had all window sashes made of mahogany and they were varnished on the inside. His famous great clock in the entrance hall was grained mahogany. His painter, Richard Barry, grained all the interior doors to imitate mahogany with box-



Figure 5 Monticello: the entrance hall with restored original colors. (Photo: H. Andrew Johnson, Thomas Jefferson Foundation.)

wood inlay on the flat panels and mottled the border to create the illusion of a raised panel. This produced an elegant and sophisticated mahogany graining unequalled in the state of Virginia. All of the doors in the house were painted over by subsequent owners, with the exception of two attic doors.



Figure 6 Monticello: original mahogany graining with imitation boxwood inlay on door from the entrance hall balcony.

The original graining survives on them in good condition. The layers of overpaint on other selected doors in the house have been removed and the original graining exposed and conserved. Many other doors have been regrained using the exposed original graining as a model.

On the exterior of the house, as on the interior, wood trim was painted white. All mahogany sashes were glazed with a reddish-brown mahogany-colored putty and then varnished. The louvered shutters, none of which survive except for one salvaged louver that may be associated with the enclosure off the South Terrace Room, appear to have been painted green. The surviving louver was initially painted with the same white used on the trim, which suggests that Jefferson thought white an appropriate color for the enclosure. Sometime afterward he must have changed his mind and repainted the enclosure green because that is the second paint layer on the louver. The use of white trim and green shutters is supported by watercolors of the 1820s that show the west front of the house.

The columns on both east and west façades and the rusticated siding on the east front portico were sand painted. This finish survived for decades and is visible in photographs from the 1870s. As at Mount Vernon and many early houses in Newport, Rhode Island where rustication was ubiquitous, the sand-painted siding imitated blocks of stone. The sand was blown on the still-wet paint where it adhered and totally covered the paint. The sand-paint finish was restored on the east front of the house in the early 1980s using sand from the Rivana River, which flows through Monticello's property.

University of Virginia

Thomas Jefferson envisioned the University of Virginia as an 'Academical Village' and his design placed the Rotunda at the head of the lawn that was flanked by ten pavilions behind which he placed a complement of supporting buildings called

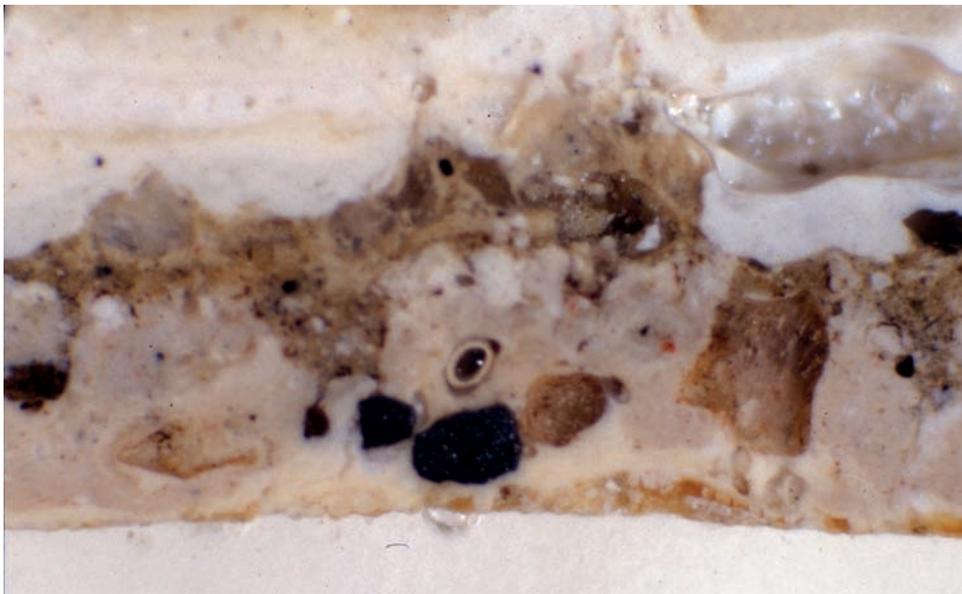


Figure 7 Monticello: cross-section of original sand paint from rusticated siding on the east entrance.



Figure 8 University of Virginia (completed 1826): the lawn with the Rotunda and pavilions.



Figure 9 University of Virginia: Pavilion VII with restored original colors and grained doors. Note the dark brown on the vertical face of the baseboards.

the Range. There were more than 20 structures. The university is a World Heritage Site and the original campus is considered one of the finest in the world.

The Rotunda, one of the most acclaimed buildings, was almost destroyed by fire in the 1890s. It was rebuilt and subsequently restored to its original design in the 1970s. Unfortunately, none of the original building's painted wood trim or plaster survive, so we will never know definitively how it was painted. But we can speculate, based on evidence found in the flanking pavilions.

Research and analysis in the 1980s and 1990s on three of the pavilions revealed that Jefferson had most of the interior and exterior trim painted with the same white oil paint used at the Capitol and Monticello. Louvered shutters, faces of baseboards and doors received different treatment. The shutters of Pavilion VIII were originally dark brown but later dark green. Shutters from other buildings show only the dark green. The exterior and interior faces of all the doors were grained to imitate mahogany, but without the stylish inlay of the doors at Monticello. On the interior, many of the baseboards were painted a very practical dark brown to hide the dirt. The plaster was light, typically painted white with limewash. The restored Rotunda was painted in the same manner, based upon this color information and that from Monticello.

Conclusions

Jefferson is an icon in American political and architectural history. Restoring the colors he selected for his buildings

has been a lengthy and fascinating process. Unfortunately, we will never know all of his choices because of previous removals and fires. The loss of original building fabric at the Capitol of Virginia, Poplar Forest and the Rotunda at the university is enormous. Consequently, evidence and documentation of colors and finishes used at Monticello and on the pavilions at the university are the principal sources of information on Jefferson's taste and sensibilities. These buildings show he used white extensively and in combination with yellows, bluish-grays and greens. Wallpapers and natural and imitative finishes of mahogany and stone, together with his choice of colors, reveal the influence of French classicism on Jefferson's aesthetic.

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