ABSTRACT

A valentine card belonging to Gettysburg National Military Park underwent technical examination to address questions about its authenticity. Dated July 2, 1863, the second day of the battle at Gettysburg, the valentine raises suspicions of genuineness due to its relatively unscathed appearance and unusual handwritten note. The materials and visual characteristics of the valentine were analyzed and compared to nineteenth-century printing and papermaking practices and to other greeting cards manufactured by the same stationer. Handwriting and historical context were studied and compared with known letterforms, language, and social customs of the Civil War period. Examination shows that the distinction between authentic and fake can be difficult to determine, particularly when dealing with ephemeral paper items that have little known provenance and no known author.

INTRODUCTION

Gettysburg National Military Park requested information from the National Park Service paper conservation lab regarding the authenticity of a valentine dated July 2, 1863, the second day of the battle at Gettysburg. The item is a shield-shaped, embossed paper valentine with colored or gilt attachments and decoration on the front and a handwritten note in graphite on the back. Due to the valentine’s nearly entire lack of provenance, and to its message being unrelated to Valentine’s Day, the following question was raised: Is the valentine authentic to the purported time period in its composition, both material and stylistic? Analysis of the valentine’s historical context, handwriting, and materials was necessary to determine whether or not this item should be included in an exhibition of Civil War objects (figs. 1–2).

ITEM DESCRIPTION

The dimensions of the valentine are approximately 16 x 13 cm at the broadest points. The support paper is a medium-weight, ivory-colored paper, and shows small areas of foxing or staining throughout. Embossed regions appear to have collected dirt in recessed areas. A name is found embossed on the front of the valentine, near the bottom right, and reads “MANSELL.” The center motto on the front of the valentine, in gold and white, reads “One Home One Heart.” Other attachments have been embossed and applied with gold, and they are painted with various colors including blue, green, white, yellow, pink, and red.

The handwriting in graphite is large, in cursive, with 0.5 to 1.0 cm of spacing between each line, covering nearly the entire area of available writing space on the back of the valentine. The valentine has been marked in pencil with the park’s catalog number, just below the signature. During previous treatment, the valentine was adhered to Japanese paper around all edges, and housed in a mat that allows it to be viewed from both sides without handling the card directly.

THE STATIONERS

Upon closer inspection, it was discovered that the center heart, outlined in gold with a ring of flowers in the center, is in fact a separate embossed piece of paper. It was likely cut from a small valentine greeting card that opens horizontally, and would have been the front leaf of such a card. A similar card is pictured, fully intact. In this case it has only been embossed, and not gilt. The stationer of this piece is unknown (figs. 3–4).

The larger, outer card of this two-sided valentine gives a clue as to its maker: the embossed name “MANSELL,” seen near the bottom right corner (fig. 5). This piece of paper was made by Joseph Mansell of London, a fancy stationer known for his embossed and lace papers in the...
Fig. 1. The Gettysburg valentine, 16 x 13 cm., recto. Dated July 2, 1863. Cotton and flax paper, painted and gilt attachments, graphite. Gettysburg National Military Park.

Fig. 2. Gettysburg valentine, verso.

Fig. 3. Gettysburg valentine, close-up of center heart piece.

Fig. 4. The same embossed heart seen in figure 3, but as a complete greeting card with no gold. Private collection.
mid-nineteenth century. This piece of the valentine may have been cut from a larger piece of lace paper in which the smooth, shield-shaped area was the part meant for writing and attachments, usually centered at the bottom of the lace paper and surrounded by elaborate decoration.

**PAPER ANALYSIS**

Fibers were taken from both the center heart and the outside Mansell paper for analysis using polarizing light microscopy (PLM). The fibers from the center heart appear to be cotton, and the Mansell paper is comprised of cotton and flax fibers. Cotton and flax are both appropriate paper fibers for this time period, and would have been found in most good-quality papers used for stationery or fancy Victorian greeting cards. Fiber analysis with PLM did not show the presence of woodpulp in either paper. Examination of the valentine under ultraviolet light did not reveal any unusual areas of fluorescence for either the support paper or the attachments.

**PIGMENT ANALYSIS**

All areas of applied color or gold were examined microscopically at a magnification of 20x and through PLM at magnifications of 20x and 40x. Photomicrographs of some of these areas are shown here (figs. 6–9). The embossed gold areas in the center heart appear to be gilt with gold leaf. The gold corners and gold areas of the flowers look to be gilt with a gold powder, possibly containing mica powder in addition to the gold. Areas of color are hand-painted, not printed, and vary in surface texture and gloss. Colors include both pigments and dyes. Paints on the attachments to the Mansell paper appear very different from the paints seen in the ring of flowers included in the center heart. However, the white paint on the center motto seems to be the same as the white paint on the attachments.

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*Fig. 5. Photomicrograph (20x) of the stationer’s embossing found on the Gettysburg valentine. Taken with a Nikon D200 digital camera through a Zeiss OpMi-1 microscope.*

*Fig. 6. Photomicrograph (20x) of the ring of flowers in the center heart, including detail of the paper.*

*Fig. 7. Photomicrograph (20x) of the single flower attachment at the bottom of the Mansell piece.*

*Fig. 8. Photomicrograph (20x) of the single flower attachment at the top left of the Mansell piece, showing white, green, yellow, and gold paint.*
to the Mansell paper and appears to be zinc white. Other pigments and dyes found on the valentine include madder lake, carmine, cobalt green, chrome orange, chrome green, and cadmium yellow. Each of these colorants was in use during and before the time period dated on the valentine.

ATTACHMENTS

When viewed under magnification, the embellishments on the valentine clearly are not printed, because there are no characteristics that can be associated with chromolithography or another printing method. The gilded corner pieces are likely to have come from a strip of the same corners connected together, manufactured by stationers for the purpose of decoration. The flower attachments are made of embossed paper that was then hand-colored, also likely to be seen sold in sheets of embossed scraps. Some stationers sold valentines complete with decoration, but the Gettysburg valentine seems to be pieced together from several different sources, and is homemade. Similar corners and flower attachments were seen adhered to other Victorian valentines viewed in museum and library collections.

LANGUAGE IN CONTEXT

The handwritten note on the back of the card reads:

July 2nd 1863. Mr. Yankee, Your house is not torn up at all, compared with the way your Soldier did at Fredericksburg. I only killed one goose + took one pair stocking. Rebel

Clearly, this is not a message that relates to Valentine’s Day. One is led to believe that a Rebel soldier found this valentine card in the dwelling of a resident of Gettysburg, and wrote a message on it because it was the only blank paper to be found. It has a tone of vengeance, implying that the author only took a few animals, while Mr. Yankee’s “Soldier” did much more damage to men and property in the battle at Fredericksburg. The language used is appropriate to the time period, as is the tone relating to the historic event taking place at the time it was purportedly written. The language also gives an indication, along with the penmanship and proper use of punctuation, that the author was a fairly educated man, perhaps an officer.

HANDWRITING

Unfortunately, there is no known handwriting sample to use for comparison, because the author is completely anonymous. Therefore, individual characteristics of the handwriting cannot be studied against another known sample by the same hand. However, one can look at the elements of style and execution within this single handwriting sample as compared to other handwritten documents from the Civil War period and observe similarities in writing style. The valentine was compared with other documents from the collection at Gettysburg written in the period of 1862–1864. Letterforms, flourishes, and general style seen in the Gettysburg valentine do not appear unusual for the time period.

There are characteristics of handwriting that may generally give an indication of a possible forgery, but none are seen here. Within the message on the valentine, there is no apparent discontinuity or shakiness in the writing, nor are there unusual pencil lifts that might be an indication of unnatural or forced handwriting by the author. There are no erasures, and no significant changes in slant, size, proportion, or style of the writing within the document. The author appears to have possibly been in a hurry, an understandable element considering the context, as suggested by the slant, orientation, and spacing of the handwriting as it progresses.

CONCLUSIONS

After a thorough examination of materials and handwriting—both microscopically and under various light sources—and after a comparison of materials and handwriting with other examples of the time, I see no evidence that any element of this artifact appears to be fake or forged. Historical, stylistic, and scientific aspects of analysis all seem to reveal that the valentine is likely to have been manufactured and written during the appropriate time period, and not after the date of the message. It is, therefore, my opinion that the Gettysburg valentine in question is in fact what it is purported to be. Further research into its historical context could be conducted in order to reveal a more complete provenance, and may be undertaken at a later date.
ACKNOWLEDGMENTS

Many thanks to the National Park Service, especially Jane Merritt, Nancy Purinton, Warren Duke, Darryl Herring, Theresa Voellinger, Max Ramirez, and James Carey. Thank you to Gettysburg National Military Park, especially Greg Goodell, for the opportunity and permission to study this piece and publish the information. Thanks also to Helena Wright for providing her expertise in printing history. My sincere appreciation goes to Elizabeth Baird for sharing her knowledge of valentines as well as offering physical examples of similar ephemeral objects and for the many hours spent in correspondence with me about this project. I thank my instructors at the University of Texas for their continuing support in all my endeavors.

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ABSTRACT

Suzuki Harunobu (1724–1770) is renowned as one of the first *ukiyo-e* print artists to employ full-color printing. Although he was a prolific designer of prints, few paintings by the artist exist today. One of the surviving examples, *Spring Outing on the Banks of the Sumida River*, is in the collection of the Museum of Fine Arts (MFA), Boston, and was treated for the exhibition Drama and Desire: Japanese Paintings from the Floating World 1690–1850. In order to better understand Harunobu’s painting techniques, the Asian Conservation Studio at the MFA conducted an analysis of the pigments used. The project involved researching Harunobu’s palette for this particular painting using nondestructive micro-x-ray fluorescence (XRF), Fourier transform infrared spectrometry (FTIR), and polarized light microscopy (PLM). The pigments found were as follows: indigo, smalt, azurite, lead white, and vermilion. The project also explored how the painting might have looked prior to an earlier treatment, using techniques such as visible, ultraviolet, and infrared light examination to reveal information that is barely visible to the unaided eye, and comparing these results with an early twentieth-century woodcut reproduction from the Japanese art history journal *Kokka Gakkai Zasshi*.

CONDITION

The painting was in brittle condition with a discolored silk support and many disfiguring infills. It had sustained extensive loss in both the support and the media. In a past treatment, the painting had been removed from its hanging scroll format and mounted on a framed panel with a gold-leaf border, so that it could be hung like a Western-

INNERSTION

Suzuki Harunobu (1724–1770) was a prolific artist and one of the first *ukiyo-e* print artists to employ full-color printing. However, little information on paintings by Harunobu has been available, perhaps due to the relatively few paintings he made and the even fewer that survive today. One such example, *Spring Outing on the Banks of the Sumida River* (fig.1), in the collection of Museum of Fine Arts (MFA), Boston, was treated for the exhibition Drama and Desire: Japanese Paintings from the Floating World 1690–1850. The remounting provided a rare opportunity to examine the painting on both recto and verso. The aim of this project was to document the condition of this painting and to investigate the artist’s technique and materials.

Fig. 1. Suzuki Harunobu, *Spring Outing on the Banks of the Sumida River* (Museum of Fine Arts, Boston). For pigment analysis figures 1–6 are numbered from left to right. Photo: Asian Conservation Studio, MFA, Boston.
style painting. The edges of the losses were trimmed and filled with thick, darkly toned silk inserts. Perhaps to compensate for extensive media abrasion and loss, areas of the painting had been overpainted with white paint in some areas which stood out against the overall aged background.

A woodblock print reproduction of the painting was found as an illustration in Kokka Gakkai Zasshi, a Japanese art journal in publication since the Meiji period. Although the 1893 article (vol. 49) did not provide much information on the artist’s techniques, the print, possibly a direct copy of the painting, served as a point of reference for possible original colors in the painting. The print also appears to reflect the condition of the painting at an earlier time, which is helpful for visual comparison to further identify the areas of restoration.

Ultraviolet light reveals the original design on a garment, only minute traces of which remain as the rest has been abraded away. An example is shown of the kimono of figure 6 on the far right of the painting (fig. 2). In normal light, only the base white of the kimono is visible in the image of the same area (fig. 3). Interestingly, in the 1893 print the kimono shows a modified version of this design (fig. 4).

Infrared Reflectography (IR) confirmed that Harunobu worked meticulously in both his prints and paintings. An example of the original line design is seen in a detail of the

Fig. 2. Detail of kimono in ultraviolet light. Photo: Asian Conservation Studio, MFA, Boston.
Fig. 3. Detail of kimono in visible light. Photo: Asian Conservation Studio, MFA, Boston.
Fig. 4. Detail of printed reproduction. Photo: Kokka Gakkai Zasshi, vol. 49, 1893.

Fig. 5. IR image of the fisherman located near figure 1.
Fig. 6. Visible light image of the fisherman located near figure 1. Photo: Asian Conservation Studio, MFA, Boston.
ANALYSIS AND RESULTS

The techniques for pigment identification employed in the study include nondestructive micro-x-ray fluorescence (XRF), Fourier transform infrared spectrometry (FTIR), and polarized light microscopy (PLM). The analysis was carried out by Richard Newman and Michele R. Derrick, conservation scientists at the MFA, Boston (table 1).

In this particular painting, indigo and azurite were found as separate paint layers over a layer of calcium carbonate. Harunobu appears to have selectively applied a white opaque layer prior to the application of another color.

The later overpaint appears to be less homogeneous than the original white paint; under magnification, random red vermilion particles were found in the overpainted areas using PLM. It is possible that the presence of vermilion results from the use of a contaminated brush by the restorer.

ACKNOWLEDGMENTS

This project would not be possible without the scholarship and guidance provided by Jacki Elgar, Philip Meredith, and Tanya Uyeda of the Asian Conservation studio at the Museum of Fine Arts, Boston. I would like to give my thanks to Michele R. Derrick and Richard Newman who taught me and guided me through the pigment identification. I would also like to thank Nancy Ash for editorial assistance.

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<th>FTIR</th>
<th>PLM</th>
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<td>White at 6th figure</td>
<td>Ca, Co, Sr</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>White stripe on 8th figure</td>
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<td></td>
<td>Calcite and starch</td>
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<td>Ca, Co, Sr, Fe</td>
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<td></td>
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<td>5</td>
<td>White at 4th figure</td>
<td>Ca, Sr</td>
<td></td>
<td>Vermilion particles were found in the paint</td>
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<td>White rule on 2nd and 3rd figure</td>
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<tr>
<td>7</td>
<td>Dark rule on 2nd figure</td>
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<td>8</td>
<td>Dark rule on 3rd figure</td>
<td>Ca, Sr</td>
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*The samples on the painting are numbered from left to right.