



Article: Confronting the Challenges of Treating Crayon Enlargements

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Confronting the Challenges of Treating Crayon Enlargements

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ABSTRACT

Photograph conservators at the Conservation Center for Art & Historic Artifacts (CCAHA) treat dozens of crayon portraits every year. Though perhaps not the most glamorous of photographic objects, a crayon portrait will likely present a number of challenges. The photograph may be convex or flat, adhered to canvas, or mounted to a secondary paperboard support. In addition to treating rather straightforward tears, scratches, and abrasions, a conservator may also be required to address complex punctures, discolored varnishes, sensitive hand-coloring and airbrushing, sprung cracks, extensive staining, and major mold damage. This paper will present an overview of the major treatment techniques and the multiple variations utilized by CCAHA photograph conservators to address these often-overlooked photographic objects.

1. INTRODUCTION

Crayon enlargements were born out of the invention of the solar enlarging camera patented by David A Woodward in Baltimore Maryland in 1857. Woodward's method involved a solar enlarging camera that sat in the window of a dark room and through the use of a mirror and a condenser lens, could reflect the light through a negative and onto the wall where it could be enlarged. David Shrive of Philadelphia patented a modified version of this camera in 1859 that could be used outdoors (Albright & Lee, 1989).

Crayon enlargements were an effective means to make enlarged portraits in a time when portrait photography was generally small in size and meant to be hand held. The earliest formats included salted paper prints with hand applied retouching and later silver gelatin developed-out images, heavily embellished with charcoal and other pigmented media. Generally, two formats for crayon portraits existed: rectangular and oval, both of which tend to generally be a standard size of 16 x 20 inches, unless they were trimmed down after production. Towards the end of their popularity, you will find some larger than the standard 16 x 20 inch size, but overall, this is the general dimension of a crayon portrait. Some of the oval format images were pressed into a machine to form a convex dome shape.

Due to inherent vice, these objects generally don't fare well as they age. Unlike most other photographs of the 19th century that were made on good quality rag papers, crayon portraits were produced on short-fibered papers that were lined overall with a water soluble adhesive to poor quality paper boards or linen canvas stretched over a wooden strainer. As a result, overall yellowing and brittleness of the paper generally occurs with age, leaving these photographs more susceptible to tearing, foxing and insect damage. Deterioration products in the paper produce tide line stains readily in the presence of moisture, especially if they have been removed from their

frames. Previous restoration campaigns that include unknown washing methods, overpainting, heavy varnishing, etc. can also make for additional treatment challenges.

2. TREATMENT PROCEDURE

2.1 SURFACE CLEANING AND TESTING MEDIA

The applied media on a crayon enlargement tends to be friable in nature, so only minimal surface cleaning approaches can be applied. A gentle air blower can be used to remove any loose debris or a soft, sable hair brush can be used to pick up flecks of dust and locally embedded accretions. Testing of the media can safely be done along the edges of the paper support and in areas where media is heaviest. It is recommended to test ethanol in addition to deionized water as the alcohol maybe be necessary to facilitate even wetting of the paper support when blotter washing.

2.2 REMOVAL OF THE BACKING MATERIAL

If the crayon enlargement is relatively stable, it can be treated in situ with the original backing still attached. More commonly, the damages that have occurred with the crayon enlargement stem from the backing materials applied at the time of manufacture. These include either a multilayer acidic board or a sheet of stretched linen attached to a wooden strainer. The adhesive used to attach the photographic paper to the backing is a water-soluble type that has weakened with age and thus will easily facilitate a dry removal of the photograph from the backing with a Teflon spatula. In the case of the convex portrait, backing removals are a far more complex and time-consuming endeavor. Treatments in situ often are successful unless sprung or complex tears are present or the portrait is not in one piece, in which case the backing removal is often necessary. The weak adhesive again simplifies the splitting the photographic portion of the image from the mount, with the caveat that a flexible Teflon or metal spatula is needed to accommodate the curve.

2.3 WASHING

Blotter washing is the safest method for removing degradation products in the paper support without disturbing the media. The object should be fully humidified via a humidity chamber prior to washing. Once sufficiently humidified, the object can be placed on to dampened blotter or Tek-Wipe material and allowed to make full contact with the washing support. Avoid touching the recto of the object while it is wet. If the object doesn't immediately make overall even contact with the washing support, a light spray of ethanol will help the moisture to penetrate the paper. Overall misting should be done lightly with deionized water using a very fine sprayer, avoiding puddles and pools of water on the surface of the image. A polyester support can be used to lift the object from the washing support to change out the washing material. Tek-wipe material has the advantages over blotter because it can be rinsed and reused several times, hence creating less waste of materials. The washing support should be changed out as many times as necessary until discoloration products are no longer visible on it.

In the case of washing a convex portrait, a more complex set up is necessary. A sheet of convex glass can be used as a support and dampened Tek-Wipe material can conform to

the surface to make the ideal washing support. (NOTE: it is not recommended to use the one that belongs to the frame structure of the photograph you are treating).

2.4 MENDING

Small tears are often common in the paper support due to its brittle nature upon aging. To avoid misalignment of fragments and small tears when tension lining, small mends are often applied to the verso of the photograph previous to overall lining. Tengujo tissue is recommended for mending for its thinness and can be applied with wheat starch paste after washing while the object is still slightly damp or when it is dry using 3-5% Klucel G in ethanol to avoid tideline stains. Pre-mending before tension lining will also help to avoid sprung tears upon drying.

2.5 LINING

Tension lining is the preferred method to avoid placing materials such as polyester webbing, blotters or felts on the friable media on the recto of crayon enlargements as they dry. Two methods can be utilized; polyester fabric (Dacron) on a sanded sheet of acrylic or a modified Karibari drying board (see appendix 1-3 for complete instructions).

In the case of the convex crayon enlargement, the convex glass can be used to line the original mount with one to two inch strips of Japanese paper and wheat starch paste that slightly overlap along a wet cut edge. The strips should be adhered vertically and horizontally, allowing time to let the strips dry in between reversing directions. Spun bound polyester and felts can be placed on top of the strips to facilitate contact and drying. Once the mount has been lined, it can be pasted out with a mixture of 1:1 methylcellulose and wheat starch paste. Working quickly, the photographic portion of the crayon enlargement can be placed on top of the mount and worked into registration with the lined mount. Allow the object to air dry until the media appears stable to the touch, then covered the recto with spun bound polyester and felts to absorb any excess moisture and allow even contact with the mount.

2.6 DRYING

When the crayon enlargements are wet up thoroughly, the media softens and can move with the slightest touch. When the paper support is only slightly dampened, the media is more stable. Therefore, air-drying under tension without anything on the face of the photograph is ideal. Once the object is air dried to the degree that is it just slightly damp, then drying materials can be put on the recto.

2.7 FILLING LOSSES

While the object is dried under tension using either the Dacron fabric or the Karibari drying board, similar weight and texture, acrylic-toned, custom cut, wove paper or Japanese tissue inserts can be applied with wheat starch paste to areas of large loss.

2.8 INPAINTING

Losses along tear lines or from insect damage can be plentiful on these photographic images but fortunately; their soft, pastel-like surface is very forgiving. An isolating layer of dilute photographic grade gelatin or methylcellulose can be applied to the surface and

watercolors can generally be used to fill in losses. Pastel pencils serve as means to matte the surface of the watercolor, replicating the surface sheen of the crayon enlargement quite nicely.

2.9 VARNISHING

If part of the treatment procedure required the removal of a historic varnish, then the aesthetic decision can be made to reapply it again post treatment. Spray application is recommended due to the friable nature of the media. Use of a non-yellowing varnish such as 10% B-72 in xylene will form a uniform and glossy coat with several air brush applications, allowing drying and solvent evaporation between each layer.

3. SUMMARY

Treating crayon enlargements can often result in dramatic before and after changes, making them rewarding endeavors for the conservator and satisfying visually for the client or curator. While this paper outlines a general treatment procedure that can be applied to most crayon enlargements, keep in mind that these are still hand-made photographic materials that will respond to each step in their own unique way due to the diligence or lack thereof of their creator. Each portrait should be assessed and a proper treatment protocol assigned for the level of physical intervention and aesthetic compensation needed.

REFERENCES

Albright, Gary and Lee, Michael, *A Short Review of Crayon Enlargements: History, Technique and Treatment*, Topics in Photographic Preservation Volume 3, 1989. pg. 28-36

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MATERIALS LIST

1. Convex Glass
www.victorianframecompany.com
2. Dacron Polyester Fabric
A specific type of polyester fiber. Available at fabric stores or on the internet. For more information, see the paper by Debra Cuoco and Heather Hamilton in the Book and Paper Group Annual Vol. 27 (2009)
<http://cool.conservation-us.org/coolaic/sg/bpg/annual/v27/bp27-17.pdf>
3. Lascaux 498 HV
Thermoplastic acrylic polymer dispersion. For technical information:
(http://talasonline.com/photos/instructions/lascaux_adhesives.pdf)
Available at Talas <http://www.talasonline.com/>
4. RK19
Rolled Japanese paper. Available at Hiromi.
<http://store.hiromipaper.com/>
5. Tek-Wipe
A non-woven fabric blend of 45% polyester and 55% cellulose hydrospun with high tensile strength and without the use of any binders, starches, or thermal binding techniques. Available at Polestini
<http://www.polistini.com/products/non-wovens/tek-wipe.php>
6. Tycore
A rigid alkaline paperboard with a honeycomb alkaline core. Available at Talas
<http://www.talasonline.com/>

APPENDIX 1- DACRON LINING TECHNIQUE

1. Lightly sand a sheet of acrylic or an acrylic tabletop to create a light tooth.
2. Apply diluted wheat starch paste evenly overall. Instant wheat starch paste is recommended.
3. Place a dampened sheet of Dacron polyester fabric over the coated plexiglass and using a squeegee, press the fabric smooth to the acrylic removing any air bubbles that develop under the fabric.
4. Coat the Dacron fabric overall with a mixture of 1:1 Methyl Cellulose A4M (3%) and wheat starch paste. Smooth with a lining brush to ensure it is evenly coated.
5. Drop line a sheet of humidified Japanese tissue to the acrylic sheet or table.
6. Paste out the Japanese tissue with wheat starch paste.
7. Immediately drop line the humidified crayon enlargement to the Japanese tissue.
8. Allow to fully air-dry overnight.
9. Insert acrylic toned paper losses, if necessary.
10. Using a Teflon spatula, remove the Dacron fabric from the acrylic. The dilute, wheat starch paste should be weak enough for this to split evenly.
11. Place the crayon enlargement face down, if possible, and gently remove the Dacron fabric from the verso of the lining paper. Some adhesive will remain on the verso of the lining tissue.
12. Trim the excess tissue from the crayon enlargement.

APPENDIX 2- PRODUCTION OF A SYNTHETIC KARIBARI DRYING BOARD

A synthetic Karibari board for lining and drying a crayon portrait can be made easily.

1. Cut a sheet of Tycore much larger than the object you wish to line. Since the board can be reused, choosing a size that is large enough to accommodate a variety of objects is suggested.
2. Cut two sheets of rolled Japanese paper (RK19 is suggested) larger than the size of the Tycore.
3. Working on one side of the Tycore at time, evenly apply the wheat starch paste to the Japanese paper and drop line it to the Tycore. Weight it and let it dry. Repeat on the other side.
4. Using a scalpel cut off any excess Japanese tissue around the perimeter.
5. Cut four Japanese paper strips about 2-3 inches in width and make them the size of the length and width of your board. These will be used to cover the sides of the Tycore. Apply wheat starch paste to one of the strips and attach it to the side of the Tycore, making sure to center the strip. Wrap the remainder of the strip so that it overlaps the recto and verso of the Tycore. Apply the three other strips in the same manner until the entire perimeter is covered.
6. Allow the board to dry overnight.
7. Coat each side of the board with a 1:1 mixture of Lascaux 498 HV and deionized water. Several coats can be applied but adequate drying time should be allowed between coatings.
8. Re-coat the drying board with the mixture of Lascaux 498 HV and deionized water after it has been used several times or if the objects don't easily release from the board.

APPENDIX 3- LINING AND DRYING USING THE KARIBARI BOARD

1. Place the humidified object face down on a sheet of spun bound polyester.
2. Cut a sheet of Japanese tissue about 2 inches larger than the object on each side.
3. Apply wheat starch paste evenly to the Japanese tissue.
4. Drop line the tissue to the verso of the object.
5. Cut a piece of spun bound polyester so that it extends beyond the object about 3/16th of an inch on all sides.
6. Place a sheet of spun bound polyester on top of the lining tissue in registration with the object. Cut an additional tab of polyester (about 2 x 6 inches) and place that near a corner of the object. The tab should overlap on the verso and also extend beyond the lining paper. These polyester sheets will keep the object from adhering to the drying board and help to lift the lined object from the board when it is dry.
7. Apply dilute wheat starch paste to the 2-inch border edges of the Japanese tissue lining paper.
8. Gently place all of those materials on the drying board.
9. Place another sheet of spun bound polyester over the face of the object and using a soft brush, brush the object in even contact with the board. This will adhere the pasted strips to the board.
10. Remove the polyester from the recto and allow to air dry under tension.