

TREATMENT OF CHINE-COLLÉ PRINTS

by Tatyana Petukhova*

As we know from history, China was the first country where paper was made. It was not until the 12th century that paper was manufactured in Europe. Although in the 15th century European paper superseded the parchment produced from skins of animals, Oriental paper continued to be a valued commodity for trade with European countries. Oriental paper was also used in specialized printing techniques developed in the 19th century since it was available in a wide range of qualities and thicknesses.

Thin Chinese and Japanese paper that was used for printing in England was called "Indian Laid," perhaps because this paper was imported by the East India Company. In France oriental paper was called more accurately "chine-collée," which translates literally as "Chinese paper attached." "Collée" is the past participle of the French verb 'coller,' which means "to attach," "chine" was the European name for paper manufactured in China.

In the 1800's high quality book illustrations and individual works of art employed a technique whereby a print was made on a very thin sheet of paper, usually of oriental manufacture. Thin paper sized with a gelatine solution in water was cut exactly to the size of the print-making plate. A thin starch paste layer was used as an adhesive between this sheet and a second but thicker paper. The bond between these two sheets was made quite strong by passing them through a press. This method of printmaking was called "chine-collé." Garbor Peterdi in his book Printmaking describes the chine-collé as a "combination of collage and printing. In this method, colored and textured papers cut or torn to the desired shape are laminated and overprinted with intaglio in one single run through the press." The chine-collé technique can also be accomplished with the lithographic printing method.

Conservation methods used for treatment of chine-collé.

Treatment of prints in chine-collé should be performed by an experienced conservator because possible delamination may occur during the aqueous procedures and correction of this is quite difficult. Delamination appears as a result of the different absorption properties of the thin and thick papers. However at the same time, these two layers have quite a strong bond and by using proper conservation techniques delamination should not happen. Yet one must always be prepared for the possibility of delamination.

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Once careful testing of the print is completed treatment can begin. First, in preparation for treatment the print should be marked slightly around the corners of the primary support using a very soft pencil. Simple point marks can be used. Should delamination occur during treatment, the marks will help to reposition the primary support to its original place.

In general, the first step of the treatment begins with a mechanical cleaning of the verso and of the recto-margins with either a soft eraser or eraser powder depending upon the condition of paper support. When cleaning is needed, eraser powder on a tuft of cotton can help to avoid the slight abrasion of the paper surface. The image area, of course should not be touched during this treatment step.

The next step involves an aqueous procedure to reduce the acidity and any stains. These objectives can be achieved by at least three different methods: first by alternately placing the print between moistened and dry blotters under light weight; second by floating the print in a tray with water (this is possible if the print is not large and if the secondary support paper easily relaxes with moisture); or third by aqueous spray on a suction table.

The first variant mentioned above is normally used by this author. This procedure involves first the moistening of two or three layers of thin archival blotters which are then relaxed and placed one on top of each other. Excess water should be squeezed out by using a brayer. The size of the blotters should be larger than the print.

Next place the print recto-side down on a sheet of dry and carefully cleaned plexiglas or glass. Then using a tuft of cotton slightly moistened with water and almost squeezed dry, moisten the reverse of the print in a circular motion to clean and to relax the paper. The relaxed print is then placed between the previously prepared moistened blotter and covered with the glass or plexiglas.

In cases where the secondary support paper is very thick and relatively unabsorbent, a solution of ethanol in water can be used to aid in the moistening and the relaxation of the paper. Simply add a few drops of ethanol to the water being used. It may be necessary to experiment with the proportions used for each particular case. Using excess water should be avoided since it can cause delamination between the first and secondary support papers. It may be necessary at times to slightly moisten the recto through a thin Japanese tissue or a layer of polyester web.

After 10-30 minutes remove the print from the wet blotters and place it on dry ones in order to absorb the moisture. Repeat this aqueous procedure followed by drying until the blotters appear clean.

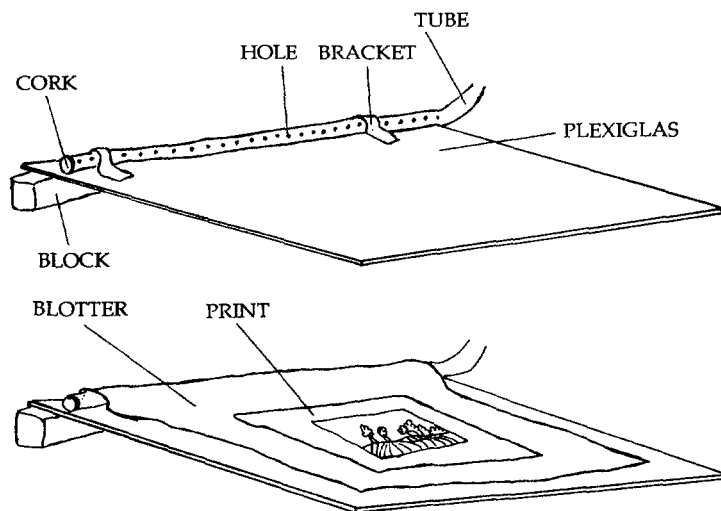
A variation of the above described method is frequently used by Russian paper conservators in treating pastel, charcoal, chalk and sanguine drawings. This technique involves repeatedly placing the drawings on moistened blotters until the blotters appear clean. The method affords greater control during treatment.

After the aqueous cleaning, bleaching can follow if necessary. Again as with the aqueous treatment, different variants of chemical application are possible. One variant used by this author is described as follows.

First blotters cut to the appropriate size are placed in the bottom of a tray. The appropriate chemical solution is poured into the tray to well saturate and to relax the blotters. The blotters should not have any creases in their surface and should be evenly flattened. Discard the unabsorbed residue of the chemical solution. Place the previously moistened and relaxed print on top of the blotters in the tray and the necessary treatment is performed.

The most difficult part of this treatment is the sufficient removal of chemical residues. If the chemical solutions used were not of high concentration then rinsing can be performed in the same manner as was previously described (i.e. print placed alternately on moistened and dry blotters until all chemical residues are gone. Testing for chemical residues is required.) Another possible variant to rinsing out the chemical residues is to use a suction table by either brushing, spraying or dropping the neutralizing solution.

If a high chemical residue remains in the print, a simple apparatus can be constructed to insure proper rinsing. For this it is necessary to have the following items: plastic tubing, a cork having the same diameter as the plastic tubing, a piece of plexiglas cut slightly larger than print, and a paper conservation sink in which this apparatus can be placed. (See diagram below.)



Lean the plexiglas into the sink at a shallow angle. Punch small holes in the plastic tubing at regular intervals along a length of tubing the same dimension as the upper edge of the inclined plexiglas. Fix the tube along this edge of the plexiglas. Connect one end of the tubing to a water tap and seal the other end with the cork. Next position the blotters over the tubing and plexiglas. Relax the blotters with moisture which also fixes them securely to the plexiglas. Place the previously moistened and relaxed print on top of the blotters and gently turn on the water tap so that a slow even stream flows continuously. The gentle stream of running water through the blotters quickly and evenly rinses out the chemical residues.

Once the chemical residues are removed, the next step, consolidation can be performed. While the print is almost dry but still relaxed, the primary support layer should be sprayed with 0.5-1% solution of gelatine in water. For better penetration of the consolidating solution into the pores of paper a few drops of ethanol can be added. Very thin warm starch paste can also be used in place of gelatine. The application of the consolidating solution should be done with the intent to compensate for some of the adhesive which was partially rinsed out during the aqueous and chemical treatments.

Try to avoid an excess buildup of gelatine or starch solution during this application. It is better to first use a more dilute solution and allow the paper to absorb the consolidant and repeat the application with a stronger solution if necessary. If excessive consolidant is applied, the surface of the print will become shiny.

The spraying of both sides of a print is preferable. However, before turning the print, let the paper thoroughly absorb the previously applied consolidant. Only spray the verso in the area where primary support is attached. The light table can be very useful during this operation.

After consolidation is complete and the paper has dried slightly, place a layer of polyester web on the surface of the print and use a soft brayer to roll the surface with some pressure. By so doing will confirm the adhesion between the primary and secondary supports. The print should be placed between felts and under weight to dry as usual.

When delamination occurs during treatment.

Delamination should not occur if the conservator is attentive during treatment. However, should the primary support separate, one of three possible situations may occur: partial delamination at the corners and margins, partial delamination within the image area, or essentially complete delamination.

If partial delamination occurs at the corners or margins, it can easily be corrected by a careful brush application of thin starch paste applied to the exposed areas of the thicker secondary level. If partial delamination occurs on small parts within the image area, it can be corrected by the previously discussed technique of spraying a consolidant and rolling with a soft brayer through a layer of polyester web.

If the primary support is almost completely delaminated, then proceed as follows. Complete the removal of the primary support by using a warm water bath or steam. Because of the extreme thinness of the primary paper, cautiously remove it from the bath by using a mylar support. The primary support should now be attached recto-side to the mylar support. By so doing will provide support during subsequent operations. Next remove the old paste residues from both primary and secondary papers with a soft brush and warm water. Apply a fresh layer of thin starch paste on the secondary support paper only to that area where the primary paper should be. Use the previously made pencil marks as guides.

The re-attachment of the primary paper is facilitated by having the print temporarily attached to the mylar support as discussed above. Carefully position the primary paper over the secondary support by using the mylar to hold the print and being guided by the pencil marks. Once the primary paper has been placed on the secondary support, relax it through the mylar with gentle hand pressure. Carefully remove the mylar so not to disturb the newly laid print. To confirm the adhesion roll the print with a soft brayer through a layer of polyester web. This operation should not be repeated. Because the primary paper is very thin and especially delicate during the reattachment, breaks and tears can easily occur.

Some of the conservation techniques described in this article have been used in Europe since the beginning of the 20th century. However today we are often too quick to forget the old methods and embrace only the modern developments. We can always learn something from the experience of the past generation of conservators. All who appreciate art and work for its preservation should cautiously combine the new and old conservation methods to insure the best results. Only by studying the past can we hope for success in the future.

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