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PLANNING FOR THE TREATMENT OF A LARGE COLLECTION OF PHOTOGRAPHS

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Among conservators it is generally acknowledged that the treatment of groups of items is generally more efficient than the same items treated individually. However, along with increased efficiency there come problems - problems of planning, problems of administration, problems with paperwork, and for those in private practice, problems with producing accurate estimates.

To show one approach with such problems, I'll present a project that the Northeast Document Conservation Center completed in the summer of 1989 - the treatment of 561 photographs of American Indians belonging to the National Museum of Natural History. Helping with this project were Gwen Spicer, then a Buffalo conservation student, and Glenn Samson, technician at NEDCC.

ESTIMATING

Before a project begins it has to be estimated. Estimating the treatment time and costs for one or two items can be difficult enough, the same procedure for hundreds of items is quite intimidating.

1. First, the collection to be treated has to be examined. Sometimes this cannot be done in person and therefore may have to be accomplished over the phone. In either case one needs to get a sense of the scope of the collection: its size, what does it consist of, are the materials in the collection similar to each other or do they offer wide variety, when were they produced, what are their dimensions. Also of importance is to define what will happen to the collection once it is treated, how is it to be returned to the client (matted, boxed, encapsulated), and what are the expectations of the client (are they looking for stabilization or something more, how far do they want treatments to go, do they expect a miracle).

This collection consisted of thousands of photographs, mostly from the turn-of-the century up to the 1920's. These were by various photographers, using various photographic media (mostly collodion and gelatin images). The photographs were of various dimensions but were almost all adhered to the same gray board (18" x 14") which had become brittle. The adhesive was water soluble. For the most part, the photographs were in good condition, but some were torn and some had losses.

2. Once there is a feel for the collection and for its potential treatment, - a small pilot project may be called for. Pilot projects have several advantages: 1) they can provide treatment times upon which to base an estimate; 2) they can point out potential problems (for example there would be no other way to be certain how much trouble the backings were going to be to be removed); 3) the client can see the results, they will know what to expect. Of course for a pilot project to be successful, you need to be certain that a representative sampling is obtained. You'll also want to know what percentage of the collection matches up with the sample received. (How many have gray mounts? How many have brown mounts?, etc.).

For the current project, five photographs were received as a pilot. These photographs were surface cleaned, washed, removed from their mounts, and backed onto a western paper. A more detailed examination was undertaken at this point, and it was found that the gray backing board had a groundwood pulp core with a pH of 3.5.

Treatment time for the pilot project took 4 1/2 hours, or .9 hour/photograph.

3. At this point I went through our records to locate any similar projects we had performed in the past. There was one project where we treated 34 small albumen prints in much the same way as proposed for this collection. It took 26 hours for those 34 photographs or .76 hour/photograph. Considering that the Indian photographs were larger and more varied, chances were the treatment times would be higher.

4. I then estimated the project on a per item basis: how long would it take to surface clean, remove each photograph from its mount, wash it, and then reback it. For photographs of this size, we usually figure about 1 hour/photograph assuming no complications.

5. Finally, I looked at the project as a whole - in other words I looked at the big picture instead of the individual items. Instead of asking "How long will it take to treat each photograph?" I asked questions such as "How many photographs could be treated in a day?"; "How many photographs could be unmounted in half a day?". Looking at the project from this angle helps to catch any gross errors in judgement and will also insure that the project makes sense.

Now, the trick is to put all of this information together. Don't forget to include material costs, packing times, inspection time, etc. Taking all of this into account (.9 hour/photo pilot project, .76 hour/photograph previous job, 1.0 hour/photograph individual estimate) we settled on (or guessed at may be more appropriate) .9 hour/photograph.

INITIAL SET-UP

The proposal was written up, sent off to the client, and approved. Now we had to get down to work. How were we going to approach this job and keep it within estimate?

One thing that I learned very quickly was to order all materials ahead of time. Make sure you won't run out! We were two weeks into the project when we realized we only had a small amount of our backing paper left. We called the supplier to rush us more, but that particular paper was no longer produced. Luckily, we were able to locate a similar paper with identical color.

Before any work was started, I had to figure out a work flow plan. I had to take into account limiting factors such as space (always a problem in conservation labs), sinks, tables, drying and flattening time, etc. Also I wanted to plan work so as to minimize set ups, take downs, and clean ups. At the same time I wanted to work in batches - whatever I could do in one day. I needed to keep the project under control and not find myself in the position at the end of the day of still having photographs in the sink which needed to have their backings removed.

In my situation the limiting factors were four - we had one large sink (6' x 8'), three large tables, six sheets of Plexiglas which were necessary for the backing procedure, and an essential drying time of three days before the photographs could be removed from the Plexiglas and the Plexiglas reused.

Measuring the size of the backing needed and the Plexiglas, I figured we could back twenty photographs in any one day. This would require two people. We would use all three tables and three of the six sheets of Plexiglas. That left me with three other sheets of Plexiglas which I could use the next day. Then I would need to factor in drying time. We found we would back twenty photographs on Monday and remove them on Thursday. The Plexiglas would then be reused that day to back twenty more photographs which would be removed the next Monday. With the remaining three Plexiglas we would back on Tuesday, remove and back again on Friday, and these could be removed and reused on

Monday or Tuesday. Therefore, we could back photographs on Monday, Tuesday, Thursday, and Friday without any logistical problems with the Plexiglas.

In this way we could back eighty photographs per week. Under optimum conditions, with two full-time people, we would need at least seven weeks for the 561 photographs. In actuality, it took thirteen weeks, but that was because there were never two people working full-time on the project.

TREATMENT

Here is the treatment procedure as eventually worked out for this collection.

First we counted the collection beforehand making sure all photographs were present. We also did a lot of counting during and after treatment as a way of keeping track of the collection. It helped us know how the treatment was progressing - were we keeping within the estimate, would we meet the deadline.

Next, we did some pre-treatment photography.

Actual treatments were performed in batches of twenty photographs. The procedure was as follows.

1. Sort; taking out any photographs which required special treatment (scotch tape removal, badly torn) or which had suspected potential problems (soft gelatin).
2. Xerox; writing the catalogue # on the xerox. This was important as the catalogue # had to be returned to the photograph after treatment.
3. Surface clean the images with moisture and cotton. This also acts as a test. If emulsion becomes soft or reacts strangely, the image is set aside for special attention.
4. With a scalpel we score the old mount about 1/4" outside the edges of the photograph.
5. Split the photographs off the mount with thin metal and teflon spatulas.
6. Wash the photographs in water. During washing, remove backing remnants.
7. Dry. Check the reverse to make sure it's clean and smooth. Lightly sand if needed. Xerox any markings on the reverse.

8. Back using dacron backing techniques. The layers consist of Plexiglas, cloth, Rising Mirage paper, University Products library bristol, and the photograph, with wheat starch paste between all layers. (For detailed procedures see the 1982 Book and Paper Group Postprints, Vol. 1, "The Treatment of Oversized Paper Art Facts" by Albright & McClintock.)
9. Dry till 3rd day. Removal sooner would cause problems of curling. Pull up, remove cloth. Trim to 14" x 18" (the size of original mounts).
10. Sometimes edges would curl up on the photographs - extending about 1/4" - 1/2" into the image. This would be set down by putting methyl cellulose under the lifted area, removing excess adhesive, and placing in a book press between blotters and Hollitex.
11. Occasionally, the cloth would break loose from the Plexiglas when it dried. This resulted in cockling of the images. These were flattened by spraying slightly and drying under pressure in a book press.
12. Match xeroxes with the images, write catalogue # on reverse of new mount.
13. Retouch losses along tears with watercolors.
14. Place in an acid-free box. Put in order, check to make sure all are present.

DISCUSSION

In addition to the lower per item cost offered by mass treatments, there are other advantages. Because similar treatments are performed over and over again, the conservator has the opportunity to recognize patterns more easily - patterns in working habits and patterns in the way photographs react to treatments. The repetition of procedures can be used to improve efficiency and quality of the work. Also the conservator has the opportunity to solve any problems which he notices by trying various solutions on the remaining objects to be treated. Often the solutions are just minor variations in technique.

Some examples of the above were encountered during treatment of the Indian photographs.

1) For several years I had occasionally noticed a minor screen pattern on some photographs after I had treated them. I had always assumed that the problem occurred during drying as I would often dry photographs on fiberglass screen drying racks. During this project we would wash the photographs by stacking them in a tray, interleaving with fiberglass screening. This interleaving with screening during washing was found to be the cause of the patterns on the photographs and not the drying procedure. So we switched to using Hollitex and Reemay as interleaving materials.

2) During treatment we noticed one other curious phenomena. The backs of mounted photographs sometimes had a slight yellow staining upon drying. I suspected this staining was coming from the backing paper but could never prove it as there were no discernible patterns or obvious reasons for it to occur.

3) One of the more serious problems we encountered was with the removal of certain gelatin and collodion images from their backings. For some reason, certain photographs were particularly difficult to remove. These photographs as well as some others would not separate easily from their mounts after washing. Usually, under such circumstances, I resort to steam which helps soften the adhesive. However, with these photographs we found that steam would cause a bubbling of the photographs between the emulsion and the paper support. So instead of steam we resorted to one or more of the following procedures:

- a) We would soak the photographs in very hot water. While they could not withstand steam, hot water didn't present any problems.
- b) After soaking and while still hot, we would work at removing the backing by attacking it from different directions. If it gave us problems in one direction, we would work at it from a 90 or 180 change.
- c) We would take off one thin layer of backing paper, put the photograph back in hot water for 5-10 minutes and try again.
- d) If all else failed, we would wash the image in Kodak balanced alkali, which had a pH 10. This would swell the adhesive, allowing for its easier removal. This could also swell the emulsion making it susceptible to damage.

4) During the course of the project we also made minor adjustments in technique in order to improve our efficiency. Some examples of this include the following.

- a) Initially we carefully centered the photographs on the backing paper using Mylar masks. We found we could work much more efficiently and do just as well by eye, without the masks.
- b) We worked out a method of measuring the photographs' mounts for trimming which did not involve the use of a ruler - greatly improving the speed of this operation.
- c) Also, when we initially started we would solve the problem of popping edges during backing by applying paste and weights. The system of using paste and placing the photographs in the press under pressure which I mentioned earlier was much more effective.

SUMMARY

There's an old saying that "The proof is in the pudding." So what were the results of these treatments.

I thought the photographs looked very good. Of course my opinion wasn't what counted - the client was the person we were trying to please. When these were returned we anxiously awaited a response. It came quickly in the form of a telephone call to our assistant director and included such comments as: "We love them." "We are like kids at Christmas."

What about the estimate? How did we do? I had allowed .9 hour/photograph or 505 hours for the entire project. We completed it in 495 hours. Sometimes we get lucky.