

# KEEPING PACE

A Monthly Newsletter Devoted to the Art of Darkroom Photography

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## Bringing Old Faded Pictures Back to Life

What can you do to improve the quality of a priceless photograph after it has been ravaged by time?

There have been numerous articles written about methods, by which an original photograph can be brought back to some semblance of the original quality.

One system that I have used repeatedly during my 50 years in the commercial field has been to:

1. Mount the original transparency into a larger sheet of film to prevent it being further scratched or damaged.
2. Then, by contact and with pin registration, make an test exposure onto a sheet of duplicating film. Make sure that the exposure is such that it just picks up the middle tones and the

shadows.

3. After processing, combine the two transparencies on registration pins and look at it against a 5000 K light box. Has the exposure been long enough, or short enough? Was the color balance of the light source correct, or should it have been modified in order to make the original look more appealing?
4. After enough time during which you can decide the necessary corrections, make a new final dupe transparency that will replace the first test that you can again add back to the original transparency. You will find that the original transparency will have been improved in a number of ways.
  - A. The overall density will have been improved.
  - B. The color saturation

has been improved.

- C. The contrast has been increased, which alone should make the new combination look sharper.
- D. From this combination you should be able to make a new dupe transparency, or make a set of separation negatives so that a Dye Transfer print could be made, or use the combined sheets of film to make a Cibachrome print or a Type R print.

This is one approach that I have used over the years. I remember making a print of Marilyn Monroe that was photographed by Douglas Kirkland. It was shot from an overhead boom and showed Marilyn in a bed with white satin sheets and, of course, Marilyn in a seductive pose. It was a 35mm transparency.

Unfortunately, the original was slightly over-exposed.

When I received this original, and was told by the account executive of the agency, that the transparency was printed earlier as a Dye Transfer print, and even though it was a faithful representation of the original, they felt that they couldn't deliver it to the client, because it looked too light. What to do?

I was heavily involved in the production of Cibachrome prints at this time.

I was using a Colenta processor, and I was also printing and processing Cibachrome display transparencies.

My first move was to mount the original in a larger sheet so that the 35mm original could be safely handled. I then made an exposure by contact onto a sheet of the Ciba display film and processed it. In 10 minutes I had a new light transparency. I then combined this new transparency to the original, **on pins** and proceeded to produce a Cibachrome print. I used an "oil" immersion system in order to keep the print clean and sharp.

The print was an overwhelming success. The overall density was improved and the saturation was correct.

Since these newsletters are black and white issues, it is hard not to be able to show you the differences visually. You will have to use your imagination.

**But now I have a project that is even more complicated.**

This again is a photo of Marilyn Monroe. This is one of the original calendar photos taken by the master photographer, Tom Kelley, in the late 1940's.

This is an out-take.

The original famous picture that was to take an unknown girl into international stardom was used for years by many lithographic firms. It was eventually lost. A copy of the original Carbro print was made. That also was eventually lost. There were copies of copies made until the resemblance to the original was finally lost.

I personally made hundreds of Cibachrome prints of this famous original photo from a copy of a copy of a copy.

This out-take transparency that I will have the privilege to work on was given to me by Tom in 1980. He asked me if anything could be done to improve the overall quality.

The original 8x10 Ektachrome is so faded that the form and contrast of the figure is very weak. The colors have faded to such a point that the flesh colors

are almost lost and the film has a decidedly purple cast.

A few issues ago, I explained what a generation loss was, and how I decided to make some corrections on an old and re-copied negative.

I extended the highlight areas and I also extended the shadows. This was fairly easy to do in black and white. Color demands a different approach.

This is not a picture that has been copied over and over but a picture that has lost its original strength and color.

**Here is what I propose to do.**

1. Make a set of contact separation negatives from this original 8x10 transparency. No contrast masks will be necessary. All I want is an image made through each of the separation filters.
2. Then, I will make a set of black and white prints from each negative so that I can evaluate the amount of density required to make an improvement to each color. This is strictly an experience using eyes and feeling. Hide your easel meter. You won't need it.
3. When I feel that I have enough added color and

shadow density in the black and white prints, I will then use a factor of 2.5 (in my case) and make a set of matrix films by contact from each of the separation negatives.

4. After processing, I will mix up a solution of Potassium Permanganate so that it looks something like Burgundy wine. As the matrices leave the hot water rinse, one at a time, I will place the matrix films emulsion up into a tray containing the Potassium Permanganate solution for 1 minute each in order to be bleached.
5. Then place this bleached matrix film into a tray of fixer, again, one at a time. This will clear the film. Then wash, hang, and dry the matrices.
6. When dried, place each matrix in a tray containing its corresponding dye for 5 minutes, then rinse the matrix through two sets of acetic acid rinses and hang to dry.
7. When these films are dry, place the matrix films in register with the original transparency and witness the metamorphoses as the addition of color, density, and contrast make a change from the original. Place the combina-

tion on a 5000 K light box. If the density is too heavy, but everything else looks satisfactory, don't be alarmed. Make a new duplicate transparency from this "sandwich" and improve upon the density.

8. If the color balance or density doesn't agree with your anticipated taste, make different density matrices or adjust the dyes in the rinsing stage.

**If you wished to make a Dye Transfer print**, the system would be a bit simpler. After a set of matrices were made using conventional methods, a series of double and triple transfers could be made with each color and the opportunity to improve the overall color balance and density could be done visually.

**This is one reason for my viewpoint concerning longevity.**

Transparencies will eventually disappear. When that happens, what is left? If a Cibachrome print is made from the original before fading begins, make a few extra prints and keep them in a light tight box. They will hold their color and contrast as long as they are not exposed to light. If Dye Transfer prints are made, then the separation negatives can be archivaly

washed and should last indefinitely.

The matrices also have an almost unlimited life of their own.

**So if a picture is a "one of a kind," preserve it, or if necessary, bring it back to life.**

Preservation is in the news lately. Some fairly recent motion picture color film negatives and prints made in the period just after the Technicolor Process was dropped in the early 1950's have been found to be fading very badly.

Major efforts by U.C.L.A. and other involved universities have been working diligently to make sure that these classic films have not been lost due to neglect.

Look into your own drawer where you keep old negatives of the family.

I have just done so and found many of the pictures that I took during World War 2 of my family and friends were not carefully washed and needed some saving. Fortunately, I was able to get rid of some old stains by re-fixing the films for 30 minutes each and then washing them for 30 minutes.

If you have some old pictures of family members who are no longer with us, it is

important to make a series of new prints and a written history about them so that you can pass this information down to your children.

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## How is Dye Transfer faring these days?

The world of Dye Transfer is still alive and well, thanks to a band of color printing enthusiasts that will never quit.

If we compare the zeal with which some darkroom technicians work we will more easily understand why this love for color printing is so strong.

An experienced black and white printer has learned to use the different techniques to provide a quality product. Dodging, burning, and chemical correction are a few of the "tools" needed to produce a top rate print. The most important "thing" that a quality printer possesses is **taste**.

Without a feeling for the image that you are to work on, there could be an image that is more technical and sterile than emotional and soul stirring.

Some of my students have managed to learn the Dye Transfer process to such a degree that the technical skills are a matter of fact and

habit. Now they are able to concentrate on the overall effect, the nuances, and the little details that are found in all great art work.

## Composition is not an easy thing to learn.

Either you have it or you don't.

It is almost like being a juggler. You must understand how the dividing of space and densities can be weighed and balanced by "feel."

Every fine artist must understand what composition is and why it is so important to a work of art. Your eye must be allowed to roam over the image without leaving the picture. The fine classical artists were aware of this since the earliest recorded art work found on the walls of caves in France.

The same thing occurs in music. A fine composer knows how to balance his composition so that your ear and imagination are led through a maze of beautiful sounds.

Here again is the same important thing to be concerned about, "emotion."

## The beauty of the Dye Transfer process is this.

Besides the obvious "tricks" of dodging and burning, there are the possibilities of subtle changes in contrast

on an overall basis or of each individual primary layer of dye. The curve shape can be changed for each layer in different proportions or as an overall correction.

When I recently was invited to witness the corrections that were possible with the new **Crosfield** scanner, I was impressed.

What really impressed me was the fact that the curve shape could be altered in a second. This meant that the shadow portion of the image could be lightened without distorting the rest of the picture. Can this same thing be performed in a conventional way with film and trays? Of course it can. It takes knowledge and experience, but it works.

Can you imagine what could be done in color by any individual that had the same taste and artistic eye of an Ansel Adams?

For your information, there are such individuals out there. I know, because I have taught a few of them. It takes time to be recognized.

If you have aspirations to be such a person, the skill with a camera is where the whole story begins. You must be able to imagine and be able to see and think.

What kind of photographer do you wish to emulate?

Or do you wish to become your own person and make your own ideas and techniques be your own trademark?

If you are a nature photographer, you must have the soul of a poet, the eye of an eagle and the feelings of a fine musician. You must be able to make a print of your captured image that will excite others as well as yourself.

**There are some tricks to learn.**

Some photographers that I have had the privilege to make Dye Transfers for, expressed themselves to me in this fashion. "I never use filters or other gimmicks when using a camera. I am an honest photographer."

Does this make sense to anyone?

My understanding is that what counts is the final image on the paper print. If you resort to dodging, burning, or the use of any other means to improve the quality of your work, then all's fair in love, war and color printing.

Examine the work of such fine photographers as David Meunch, Ray Atkinson, Galen Rowell, and others, and you will realize that all sorts of filters were used, including split colored filters, polarizing filters, decimered color correction filters, some-

times double exposures, and pushing or pulling the development of the color film to affect grain or contrast. All of these steps are legitimate means to an end.

**The end is the most important part.**

Speaking of ends, a former Kodak employee, Villa Reed, a retouching expert, retired from Kodak over five years ago. She has now under contract to Fuji. She has invented several new ways to retouch Fujichrome and Fujicolor films. She will be giving a paper at the June meeting of the Society of Photographic Scientists and Engineers. Obviously, Kodak could not too happy with this situation.

A good friend of mine, Don Mitchell of Mitchell/MacMurchy, Kansas City, MO. has come up with a good idea for those of you that are involved with making multiple images, either on film or paper.

We are all aware of the impact that the new work station retouching machines have had with our reproduction quality images. Don's idea is to form an association to keep ourselves informed and possibly get into this great field with less worry.

The reason for such an association:

1. A Forum for exchanging ideas.
2. Co-Op advertising.
3. Lobby group to film manufacturers.
4. Seminars.
5. Networking. (Helping each other in overflow situations.)
6. Training for new technicians

Don feels there is plenty of room for the optical photo-composer to work hand in hand with the electronic technicians.

The cost factor is one of the main reasons for his optimism. The hourly charge for using an electronic work station is somewhere between \$250 and \$800.

If a photo-composed piece of film could be made with the standard lab techniques, then sent to the work station to be "retouched," he feels there is room for this kind of arrangement.

What do you think. Let me know if this kind of an association seems feasible.

You can write directly to;  
Don Mitchell.  
Mitchell/ MacMurchy  
617 17th St.  
Kansas City, MO 64108

**About the Minolta Color Head.**

A few issues ago I wrote about my concern with the speed of the new Minolta

color head when making Cibachrome prints. My main concern was that the light source was too slow for making masked Cibachrome prints.

However, if you use the new Dye Chrome Research Co. chemistry, which will allow you to lower the overall contrast range without the use of a mask, the likelihood is that the Minolta head is fast enough.

It certainly has the convenience of using an accurate color head with the minute corrections you may wish to use.

I hope I haven't led some of you astray. I see things from a professional viewpoint and sometimes do not realize that some of you out there that are in this just for fun.

**The revival of the Carbro process.**

Before I go into what is currently being done in the field of Carbro, let me first tell you what it was like for me over 45 years ago. I began in earnest with the process just after World War 2.

I was out of work and was knocking on all kinds of doors that had to do with any phase of photography. even faster.

I wanted to be involved with color printing. This was before Dye Transfer was

introduced. I used to visit a Carbro technician named Joe, who worked for Tony Venti, a top notch illustrative photographer in New York during the 40's and 50's.

I would watch him work with the condition that I never asked any questions. I learned the mechanics of the process rather quickly. The difficult part was to come later when I had to make prints from separation negatives made with a one shot camera with which I had supervised the shooting during the day.

The system worked as follows.

The separation negatives were produced in one of three ways.

1. Separations shot with separate filtered exposures in a camera, one at a time.
2. Separation negatives shot with a "one shot camera."
3. Separation negatives from a transparency made by contact in the usual manner.

The first step in producing a Carbro print, once the negatives were available, was to make a set of "bromides." These black and white prints were made in the usual fashion. We used Kodak D72 developer, a forerunner of Dektol.

The paper we used was

manufactured by Ilford, in England. It had 4 coats of silver in a thick emulsion without a protective coating. The blacks were the best I have ever seen, even to this day.

These paper prints that represented the three primary colors, Cyan, Magenta, and Yellow had to be made with accuracy. This was the most important step in the entire process. The Density and color balance of the final print was determined by the quality of these black and white prints. We would make test bromides and fold them in order to compare them with other prints of the same image. We would try to match areas that were considered neutral.

After making prints every day for 6 months, one began to see the balances quite easily. Little differences in tones could produce a warmer or colder print with little effort.

After these prints were made, they had to be combined with sheets of sensitized color pigments. These sheets of pigment were simply colored pigment layered over white paper.

The combining system looked like a "Rube Goldberg" invention. A large roller and combining system was used. The colored pigments were "sensitized" and then combined with the correct

bromide that represented that particular color. The paper print was placed on the top portion of a hinged plastic blanket and the sheet of pigment was placed on the lower portion of same blanket. After some time in the sensitizing solution, (a solution in which the chemical Potassium Dichromate played the important tanning role) the two sheets were rolled into contact. This procedure had to be done with the utmost precision and timing, otherwise the contrast would be affected. This was done three times. Once for each color. The combined pigments and bromides would stay combined for 15 minutes. The next step was to open the plastic blanket, peel the bromide from the pigment sheet, discard the bromide and soak the pigment in cold water. The paper sheet of pigment was then placed face down onto a clean fresh sheet of celluloid (coated with beeswax) and squeegeed into place. This, again, was done three times. Once for each color. The next job was to produce a clean photographic image from these sheets of pigments. Remember, the sheets of pigments were placed face down on the sheets of celluloid.

The sensitized image was already hardened. It had to be retrieved from the pigment. The first sheet of plastic with the Cyan image was placed into a tray of very hot water, with the pigment on the top. The tray had to be very large in order to accommodate the celluloid sheet. After a few moments, you would see Cyan color oozing out from the edges of the pigment paper. Moving the sheet of celluloid from left to right would continue to soften and loosen the pigment until the entire sheet of pigment paper was dislodged from the sheet of plastic. The image looked like a blob of Cyan dye on a clear sheet of plastic. Continuing to rock the plastic sheet would result in more of the pigment being dissolved and dislodged. After a few minutes of this, we would end up with a sheet of plastic with a clean clear photographic Cyan image on it. No blacks, only pure color. The same thing was done with the other two colors, one at time. The three sheets of plastic with their colored images were dried thoroughly. Then began the real work. Putting everything together. The hot water tray was removed and replaced with

a fresh tray of very cold water. Into this tray we inserted a sheet of "temporary support paper." This paper had the ability for it's emulsion to dissolve in warm water. It had to be kept cold at this point. The paper was removed from the tray and placed over the first image (Cyan) and squeegeed into place. As much water was removed as possible. This image was placed into a very gentle and warm dryer. In a few minutes, this paper would "ferrotype" off the plastic and it would contain the cyan image. The plastic sheet was now clear. Then the paper was soaked again, in cold water, and laid over the magenta image. Looking through the other side of the plastic enabled one to see through the cyan image and by moving the magenta image place it in register with the cyan. We were able to bend the plastic and hold it in position with a clip. The paper was flexible, so registration had to be done by eye. Some parts that were out could easily be brought back in register by stretching the paper by hand. When this was done and as much water as possible was removed, it also was dried until it too, would ferrotype off. The same procedure was

done with the yellow. Now we have a sheet of temporary support paper with the entire image on it) in reverse.)

Again, we soaked the temporary paper in a tray of cold water along with a sheet of double weight "final support" paper.(Dye Transfer paper could be used.)

These two sheets were combined with a squeegee and the sandwich was placed under weights for 30 minutes. Then the whole thing was placed into a tray of hot water and the temporary support dissolved leaving the final image on the final support paper.

When this was done with perfection, the results were great. Dry the print.

If you happened to be a little off color you had very little chance to "correct" the print.

If you noticed the print exhibiting too much yellow while the print was still on the temporary support paper, you could reduce the yellow alone by rubbing the image with cotton soaked in kerosine, and pumice.

On the other hand, if the print looked as though it was too Cyan, and it was on the final support paper, use the same procedure to remove some of the Cyan.

The magenta had to be removed using alcohol. No rubbing, just wetting and immediately washing off with

water. This usually produced a pink stain in the wrong place.

Can you now see why I have so much appreciation for the magnificent Dye Transfer process?

**A Revival of the old Carbro process**

A young professional photographer, Reece Vogel, of Los Angeles has the necessary equipment and material to make Carbro prints as they used to be made in the early part of the century. He purchased the coating materials and other sundry supplies from the original McGraw Colorgraph Co.

Contact him at 213-624-0593

Instead of making black & white prints known as bromides" he makes carbon prints to achieve the same result because there is no equivalent photographic paper that would compare with the original Ilford paper of the 1940's.

I wonder if matrices would provide a good source for the black and white portion of the process?

I have yet to see the prints made by this young man, but I am sure I will be in for a pleasant surprise.

These marvelous color prints are probably the most archival of all .

The latest Carbro craze is being sponsored by the Polaroid Company. The pigments produced by Polaroid require that a set of screened separation negatives be made in order for the process to work. I have seen prints made with these materials and was quite impressed.

Clinton Smith has one of his 20x24 new Carbro prints on exhibit, and for sale at Susan Spiritus Galleries with a price tag of \$6000.

I will attempt to learn more about this latest craze and will report on it in my next issue of "Keeping Pace."

- Subscriptions to this newsletter ..... \$60.
- Back Issues ..... \$4.
- Video Package ..... \$200
- "The Art of Photo Composition.....\$50

**You will all be getting notices about the availability of my new book on Cibachrome, very shortly.**

The prints in this new book will consist of real Cibachrome prints, not lithographic reproductions.

The contributing photographers include Tom Kelley, Galen Rowell, Vern Clevenger, and Keith Logan. Thanks,

**Bob Pace**  
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