

KEEPING PACE

A Monthly Newsletter devoted to the art of darkroom photography

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Quality Printing. Just what does it entail?

What does print quality really mean?

If the print excites the viewer, that's it. It's all in the eyes of the beholder.

This seems like a very broad statement, but if you analyze it, I'm not far wrong.

I have thrown out prints that, to me, were not adequate. Then I saw strangers walking in the alley area behind my lab and pouring through the trash and finding "masterpieces."

However, there is a measuring device. **It is the eyes of an experienced lab technician** that has been through the baptism of fire.

For instance, what separates one photographer from another? An Ansel Adams comes along and dominates the scenic field for years. Why? Is it because he has a better understanding of composition, or a feeling for texture, or a sense for the dramatic, or a love of nature,

or many other little things that most people never dreamed were important?

The answer is **YES** to all of the above.

If any of us were fortunate enough to have attended art school and studied fine art painting by the masters, you would realize that the old master painters knew all of the things that Ansel Adams knew, (except for the field of photography) and then some.

So, taking a picture is a skill all by itself. The eye and brain must work in a coordinated effort to achieve a stunning image on film. This requires that knowledge of sensitometry and densitometry is a must.

So far so good. Then what?

You already know my feelings about the dual purpose that photography affords to the photographic community, the first is using a camera, and the second, producing a print.

My training has been invaluable to me. I studied art with the aim of becoming an illustrator. This didn't pan out, but the training stuck to me.

As a result, when I finally got involved with the color field, it was in the higher echelons that I was attracted to.

I worked with the best "camera" men and women in the business. They usually shot in large format, though a few used 35mm exclusively. But every single one of them wanted to make a print of their work. Naturally, most "camera" people have been too busy learning their camera craft. Making prints was usually left to others in the photographic field.

So, what did I learn from the very beginning?

Making a black and white print was child play. That is what I thought when I first began to make prints. I placed a sheet of photographic paper in a contact frame with a negative,

exposed it to light and processed it for 2:00 minutes at 68° in D 72.

Voila, I was a printer. It was so simple. What was all of the fuss about quality printing? I was able to make a print that had the proper density, a pretty close contrast and it looked nice. Even my family and friends thought so.

Then one day, I made some prints for a tall stranger when I was working as a printer for a local New York black and white lab.

I was introduced to this man. He stood next to me and told me what to do. I obeyed his every command. I never did dodging like this before, or burning in with such boldness. The prints looked great. The man's name was **Henri Cartier Bresson**. I didn't know then who he was. But I have never forgotten his prints. He actually made them. He was just using my hands.

It began to dawn on me that there was much more to printing than just making an exposure and simply processing in a tray for a specific amount of time. I began to examine the works of some top notch photographers that had local exhibits. I was floored when I saw my first Edward Weston's.

I was flabbergasted when I saw my first Carbro prints. I thought that they must be alive.

Then I had the opportunity to work as an assistant to an old man from Germany who worked in the same photo stockhouse that I did. He taught me to "see, think, feel, dodge and burn, and learn to be a craftsman and how to be repetitive and clean. I became a very good black and white printer.

This craftsmanship education has gone on all these years and still hasn't stopped. Learning the photographic skills is akin to music. You can never stop learning.

Let us take the skills of top technicians like John Sexton, or Ansel Adams. There are hundreds of people that have studied with these two fabulous men and have learned much. It shows in their work.

What do they do to make sure that the print they make is exciting and conveys all of the mood and feeling that they intended?

When a negative is shot in a large format camera, and all of the skills to use the zone system are brought to bear, and the processing skills in the darkroom produces a clean accurate negative, they are just at the midpoint of the photographic endeavor.

John Sexton has told us just what he does, if you read the articles in magazines like

Darkroom Techniques.

After he produces a negative and makes a proof print, he examines the print carefully. If he needs more contrast, he has a few options to consider. He could use a higher contrast grade of photographic paper, or he could juice up the developer a bit, or he could selenium tone the negative to increase both negative density and contrast.

If he needed to increase contrast in only one area, he could "paint" the toner over the chosen areas and stop when he thought the result was right.

Then when the print was made, he had a few more options. He could use a selenium toner to increase the blacks in the paper print, and he could also use a Ferrocyanide bleach (Farmers reducer) in order to bring out highlight details and brilliance.

What I am trying to say is this. **It is a rare print that was printed straight with little or no manipulation.**

Has this been going on long? Yes. Since the early days of the photographic invention.

What has all of this to do with today's color materials? Plenty.

If you are a serious printer, you must be aware of the mountain of junk that is out there in the photographic

field that hides under the label of "Commercial Photography."

There are millions, if not billions, of photographs that are made all over the world every year. Why is it that only a few are recognized as "art?"

If you frequent photo galleries you will recognize the photographers that get hung more often than others. A print is involved, and it had better be good. It must reflect the intentions of the photographer.

Are any of the "tricks" used in black and white printing available to a color printer? There sure are. Possibly in different forms, but they will do the same job.

If you wish to work from a color negative, and want to improve the contrast of the picture overall, simply make a positive by contact, from the negative, using a panchromatic sheet of high contrast material such as Agfa's P 911. Process this positive sheet in a continuous tone developer such as HC-110 in a dilution of 50cc per liter. This will give you an image with a bit of snap. Then, from this positive, make a negative, again by contact, on a relatively soft material, such as Pan Masking film, with a developer dilution of 30cc per liter. Process this sheet anywhere from 30 seconds to 2:30

minutes. Add this soft image to the original negative and proceed to make a new print. The print will be "new." Using good registration equipment will be an advantage.

If you wanted to only add contrast to a specific area, simply bleach out the unwanted areas with "Farmers reducer." You will have to burn in the selected area if you bleach out any other portion.

Can you soften the print using a mask? Of course you can. Make a positive by contact from the negative on a soft material such as Pan Masking film. Use a dilute developer such as HC-110 diluted 25cc per liter. A short developing time of around 1:30 min. could drop the contrast by one paper grade (if it were a black and white print.)

Suppose you were working from a color transparency and were going to make a Cibachrome, Fujichrome, or Kodak's Type R print. Because of these materials contrasts, all three materials need masking in different proportions to do a creditable job. Only the lowest contrast originals make decent prints with any of the aforementioned papers. Contrast can be decreased using a negative mask together with the original.

Small trouble areas can be treated by bleaching areas out in the mask, in advance.

Could you increase contrast in the any area of the original? Yes you can.

The "trick here is to make a weak duplicate transparency of your original and add it back to the original when making the print. This will increase contrast and color saturation. I have done this many times.

In fact, one of my advertising clients had a print made from an original of Marilyn Monroe, photographed by Douglas Kirkland. It was a 35mm. transparency. It was overexposed at least a full stop. The picture consisted of Marilyn lying in a satin sheeted bed with the camera angle directly overhead. The image was weak and slightly colorless.

The client was in hot water as he promised a print as a gift to one of his major clients but felt that the original wouldn't work.

He gave it to me and said, "What can you do to save this picture?"

I examined it and knew immediately what had to be done. Since I was going to produce a Cibachrome print, and I already had a Colenta processor running, I simply made a dupe transparency of the original on Ciba's display transparency material.

I processed it in 12 minutes and then placed the duplicate over the original, in register, and the image was improved 100%

The color was deepened, the contrast was improved and the detail and modeling was restored.

A little masking was required to complete the metamorphosis.

Needless to say, the print was accepted, otherwise I wouldn't be telling you this story.

How about the Dye Transfer process?

Is it possible to make dramatic transformations by using dodging and burning techniques? You bet your life it is.

In fact, the Dye Transfer process probably allows one to make more corrections and adjustments than any other process, including black and white.

There are many methods that can be used to alter the final outcome of your print. Most importantly, you should have some idea of what you are trying to accomplish. You should be able to "see" the final print in your mind's eye.

Without this ability to predict the final print, you will be working on a "trial and error" basis.

After the original transparency has been shot and processed is where some of the truly creative possibilities

can take place.

Suppose the original transparency has a look that doesn't quite fit your interpretation of the original scene. You may want to emphasize a specific portion of the scene, or you may want to alter the emotional impact that you are trying to convey. How can you do it?

Suppose the original looks too flat and looks as if it was lacking color saturation? A few suggestions for correction are as follows.

1. You can make your principal masks to a lower gamma and therefore increase the contrast and saturation in the final print.
2. you can alter the overall contrast of the matrices when they are processed by changing the proportion of the A developer to the B developer.
3. You can also change the concentration of the dyes by adding concentrate dyes to the dye baths.
4. You can also add specific amounts of acetic acid to the dyes.
5. You can double transfer the dyes in all colors or in selected colors only.
6. You can also "paint" dyes in the selected areas of the dry matrix that you want to change and transfer the image

again and again.

If you want to lower the contrast or saturation of the entire print or selected areas, you have a few choices to follow.

1. Make your principal masks to a higher gamma than normal, which in turn will lower the contrast of the final print.
2. Process your matrices to a lower contrast by adjusting then proportion of the A developer to the B developer.
3. Adding the chemical Triethelalomine to the dye baths will lower the PH of the solutions and therefore, the contrast of the dyes.
4. Adding Sodium acetate to the running trays will lighten the image as well as lower the overall contrast.
5. A method known as "withholding Matrix" can also be utilized to change or lighten any area of the final print.
6. You can also "paint" in with chemicals, such as Sodium Acetate or "high-light reducer" in selected areas of the matrix which in turn will change the appearance of the final print.

Can dodging and burning be done with complete accuracy? **It sure can.**

Normally, when dodging or burning on three separate matrices, problems will arise. Placing a dodging tool in the exact position by hand is impossible. However, here is a simple trick. Make a dodging or burning mask using fresh film. Use your enlarger as a light source and simply dodge or burn the correct shape on the film, process it, and use it by placing it on register pins when making exposures on your matrix film.

What kind of density?

Make a series of different densities and record them. If you need to lighten an area by one full stop, use the mask that has a density of .30.

If you have to darken an area by one full stop, make sure that the background of the mask reads .30.

Use the appropriate density mask to make the necessary density differences in the print. Use the pin system and eliminate the strange occurrences that happen when dodging tools are not placed in the same position.

In other words, there are so many avenues of approach to manipulating the final outcome of a Dye Transfer print, that you could virtually make a print that didn't even resemble the original. This I don't recommend.

Dodging and burning were the main tools used for

generations. Chemicals are now added to the list of "tools" that can be used to manipulate the image.

In a few months, I will have an article in one of the major magazine describing a method that I have been using to bring back almost lost transparencies to an almost original state.

I have in my possession an original 8x10 transparency Ektachrome of the famous Marilyn Monroe calendar photographs taken by the legendary Tom Kelley Sr..

This particular shot was never used for reproduction. However, the original picture that was used has been lost forever, except for the few separation negatives and plates used for printing the original calendars. Even these have been lost. Who knew then what a famous photograph this would become.

The only thing wrong with this surviving 8x10 original is that it is very badly decomposed. It has lost most of its contrast and color saturation.

This is where I come in. Tom Sr. gave me this original in 1980 and asked if I could do anything to improve its appearance. I said that I would try.

In the ensuing years that followed, Tom Sr. passed away and I almost forgot

about this lost treasure. Since this newsletter is being printed in black and white, I can't show you the results, but if you use your imagination, I will describe what the problem is.

The image has lost its contrast, some of the cyan density and almost all of the yellow density.

I decided to do the following:

1. Make a set of unmasked color separation negatives.
2. Make a set of black and white prints by contact so that I can "see" where the lack of color is and possibly judge the amount of correction needed.
3. Once I determine what I consider the correct exposure for density I then expose a matrix for each color, by contact.
4. These matrices are processed in the normal A & B developer concentration.
5. I then bleach the matrices using Pottasium Permanganate diluted in water so that it looks like Burgundy wine, then I clear it in a solution of Rapid Fixer. The result is an almost clear sheet of film.

The emulsion is still there but almost invisible.

6. Then I place each matrix in it's proper color dye.
7. After rinsing each matrix in two 1% acetic acid baths, I dry them by hanging them in a dust free warm air flow.
8. Then I placed each colored matrix on pins and examine the sandwich through a 5000K° light box.
9. If necessary, I keep making additional matrices and adding the proper color to the sandwich until I feel that the saturation has been reached and that the contrast looks correct.

When all the pieces were added to the original, all that had to be done was to make a new duplicate transparency.

This was an exercise for the eye rather than the brain. I don't know of any method that could be used with any mathematical skill that could restore the color and density to the original. By making as many sheets of any color that I needed, I could use my eyes and determine when enough was enough. Each sheet, if it were made with a short exposure, would add contrast to that color. When a matrix was on the heavy side, I would be adding density to that particular color.

The result of this chore was an almost renewal of the transparency to it's original quality when it was shot back in 1948. I will alert you when this will be reproduced. I have to find the appropriate magazine that will do this article justice.

So far, this newsletter has dealt with the ability of a qualified darkroom technician. A good technician can make or break a photograph. This message is to beware of printing systems that do not allow for the manipulation of the image so that a more dramatic and exciting print version is possible.

You have all seen ads in magazines that will offer to make a 16x20 Cibachrome print for \$25. Can you imagine how little constructive manipulation is ever done to a print for this price. You are much better off making your own print.

I have had the privilege of using a CAP 40 processor from Ilford. I have been using it to make the many prints needed for my new book about Cibachrome. It had a few faults. The processing system allowed the paper to float emulsion down across a plate that also had the chemistry flowing across it. These plates had a small problem. Small rows of little

peaks kept the paper from sticking to the plate. However, sometimes the paper edge would hang up on these little peaks and thereby destroying the print as well as allowing the chemistry to back up into the preceding tank and, good-bye chemistry.

I called the New Jersey office of Ilford and they sent me a set of new replacement step plates which I immediately installed. They work perfectly. Some of these original CAP 40 machines are still available for \$1700 from the New York camera stores. If you order one, make sure that you get the replacement step plates for this model. The new ICP 42 has these plates already installed in their new machines.

The new ICP system costs over \$2500. The new optional washer & dryer cost about the same. For a small darkroom with limited output, these machines are worth it. However, compared to a Jobo, there are some interesting comparisons. A Jobo will produce one print at a time. The drum must be washed and dried each time a print is made. This is a slow process. However, the chemistry is used as a one shot system. The results can be identical, print after print. The CAP 40 or the ICP 42 will produce a print every few minutes, but the

chemistry is used over and over again, so it loses some of it's effectiveness as you approach the end of it's usefulness. There is no provision for replenishment. As I said. This is for a lab with a small out put.

The new **Fujimoto** processors are equipped with replenishment systems and do need more initial chemistry than the CAP 40. But for a bit more money, much more output is possible with less time for maintenance. They can also handle the Ciba P3 chemistry, which the CAP 40 and the ICP do not.

Here is an idea for those of you who would like to be in the business of restoring old photographs.

Do you have a computer? If you say no, I am lost. For this project, a computer is a must.

Instead of using an air-brush, and paints and all kinds of bleaches, here is a system that will allow you to work with clean hands and leave no mess.

As you know, when you are about to restore an old picture, the normal procedure is to first copy it. You never want to work on someone's priceless original. If you should ever screw it up, you may have to leave town.

If you make a copy of the old photograph, you will already

have lost some of the original curve shape. Then when this copy is worked on, a new copy is made so that subsequent prints can be made. This makes 2 copies.

However, if you scan the original first, and there are plenty of scanners around to choose from, you can then do your retouching using a computer and a digitized work station program.

The scanner will have no curve shape loss as you will be working with an electronic image.

The scanner is the only real expense if you already have the computer. Most scanner manufacturers are so competitive today, that they will include a retouching program, such as Digital Dark-room, or Photoshop, as part of the scanner price.

With these programs you can lighten, darken , change contrast, add density, remove imperfections, and many other tricks that can be seen right there on the screen.

When you feel that you have accomplished the job, save the image on a 3 1/2 in. disc. and either take the disc with the saved image on it to a local engraver that owns a Linotronic 300 system, or send it to him by modem, tell him what size you want the final negative made to and the size of the screen. The finer the screen the better.

The charge for a 12x18 screened negative at 165 lines is under \$25.

This negative can be used to make a brand new black and white print or a new Carbon print, that could last for hundreds of years.

All this without the retouching paraphernalia. Think about it.

If you are in the business of making Cibachrome color prints or dupe transparencies, then you must be making masks to reduce the contrast of the original transparency. Some labs have even considered "flashing" as one way of reducing the overall contrast of the material.

There is really only one way to reduce the overall contrast of the Cibachrome material and that is by very select and controlled masking.

than that, but for simplicity's sake, let's all agree that what I just described is a mask.

It's possible to actually make a mask to the exact percentage of contrast reduction and make superior prints as a matter of habit and fact.

The main reason for this article is to explain how to correct some of the highlight areas of the photograph that become affected when making contrast reducing masks. Remember, the mask is actually a negative

and has darker areas in the highlight sections that anywhere else. This sometimes causes a loss of contrast and detail in the highlight areas of the photo and as a result could cause you to have many remakes.

Restoring some of the highlight detail is not that difficult. If your highlight areas are becoming too grey and lack snap and detail, try making a positive mask that you can add back to your original (positive).

Make the mask on a specific material such as Kodak's LPD4 (a reversal film) by exposing the original by contact to this reversal material.

By keeping the exposure deliberately short, the only detail that will be visible will be the highlights. Use this piece of film and your transparency in the following manner.

1. Place contrast mask on transparency and place in enlarger carrier using registration pins.
2. Make your main exposure using vacuum and register pins on the easel.
3. Remove carrier from enlarger and replace contrast mask with this new mask. Let's call this a "Bump" mask.
4. Give an additional exposure on the same sheet of paper. (usually about 100% more.)

This technique requires eyes and taste so as not to abuse the highlight area by making it too detailed or too brilliant.

The results can be just the thing that will make a difference between a good print and a spectacular one. This same technique can be used on any positive type material such as Cibachrome or Kodak's Type R or any duplicating color film.

A change in my living status is about to happen. We are planning to move. We will be located in Green Valley , Nevada, at the end of October.

This means that my lab will be dismantled and sold. I will establish another lab in Nevada. I am not planning to become cloistered.

My teaching methods will be slightly different. For the past 6 years I have had students come to me from all over the world. From now on I will have two alternatives.

The first option that I plan to start is a home study course using charts and books and a video camera to give private lessons to individual students. I will concentrate on the three courses that I have been working on all these years. Cibachrome, Dye Transfer and Photo Composition.

My second option is to establish a **travelling workshop**.

This will not be a totally new concept, as I have been travelling to various students for the past 5 years teaching all of the courses that I specialize in.

The later is important because of by my being there in the students environment, experiencing all of the variables that can drive one to drink.

I don't have my new adress or phone # as yet, but you will all be notified when I know what it is.

In the meantime, I have been in touch with some of my old colleagues in the Dye Transfer field. The fact is that most of them are experiencing difficulty in staying alive. They have all started to include printing services that they never thought they would have to.

And yet, the Dye Transfer field is growing in the art community.

In the meantime, if you know of anyone who needs a book or video about Dye Transfer, Cibachrome, or Photo Composition, tell them that you know where these items are available.

Thanks,

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