KEEPING PACE

A Monthly Newsletter Devoted to the art of Darkroom Photography

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Masking is not that difficult

I am bewildered by the continuing assualt on masking. Most amateurs feel that the necessity for masking is overblown. The different darkroom magzines continously have articles written by "experts" about different methods of reducing contrast.
Some "experts" claim to have solved the puzzle of making good Cibachrome prints by a number of different methods. Some have subscribed to chemical solutions, and some have decided to use a photo sensitive glass to achieve better than normal prints. I have even read where some "experts" have deliberately screwed up the original transparency by developing it to a lower contrast than what is considered normal, then making a Ciba print that they feel is great.

Let me place this problem in the proper perspective and tell you what I think.

All films can be controlled to produce a specific contrast (gamma), and a specific density. **All films**

In the case of Color films,the manufacturer has to produce the material with such accuracy that the film can be exposed to a given light color temperature and then developed to a specific contrast so that the contrast curves of all three 3 layers match as closely as possible in order to produce a neutral grey, black and white.
Actually, the manufacturer has the biggest problem of all. He must be able to manufacture the films, papers and the chemistry so that his manufactured product is repeatedly and consistantly "correct."

Can you imagine what kind of controls are necessary in order for the manufacturer to make his product, year after year, and still achieve the same speed, color balance, and contrast levels.
All that we are asked to do is to follow the manufacturers prescribed system of exposure and processing.
But this is the area where most of us have trouble .
It was because of our inability to accurately expose and process black and white film that the manufacturers were forced to produce variable contrast papers.
Before I got involved with the fields of densitometry and sensitometry I was working for a photo "Stock House" in New York City. This company had over a million black and white negatives in stock and close to a 1/4 million transparencies.

This was the forerunner of what is now a common business. Companies such as Image Bank, and others have taken off where this stock house left off.
My job, every day, was to produce as good a print that was possible from these, sometimes, very old negatives.
I had 5 different grades of paper on my shelf, manufactured by both Kodak and DuPont. These two manufacturers were about 1/2 a step apart in contrast, so in fact, we had paper from grade one to grade 5 in 1/2 step increments.
Was this a necessity?
It certainly was.
The negatives we worked from varied from being very flat to extremely contrasty. Some were copies of copies and were far from being "good" negatives.
I made prints every day. I was constantly changing the paper to different grades in the hope that a more pleasing print would be forthcoming. Sometimes I guessed right and the boss was happy. Sometimes I didn't. However, there is a story here.

One of the photographers who's work was being represented by the firm, managed to make beautiful negatives. They always were printed on # 2 grade paper. For some reason, they were always "right on."

His name was Gustav Anderson. His full time job was as a photo-engraver. I called him at work, told him who I was and asked him how in the world did he manage to get his work to constantly print on grade #2 paper.
He asked me if I was familiar with H & D. I said, "no."
"Go to the library and read about them." That is what he told me.
I did and discovered the 2 gentlemen from England (Hurter and Driffold) who "invented" the system of reading and measuring contrast. "Gamma" is what it actually is called.
I then decided to make a thorough study of the densitometry and sensitometry and this gave me a greater understanding of the material that I eventually was to be involved with. I plotted many curves and finally understood what these two men were all about.

I found that I could go out with my 4x5 Graflex camera, with separate film holders, read the contrast of the scene, calculate to what gamma the film had to process to and did so, and improved my black and white work immediately.

What has all of this to do with color?
Plenty.
When I first began to make Carbro prints, we were faced with contrast problems of even more crucial importance. The entire set of separation negatives had to be in contrast balance, and hopefully, in density balance.
These negatives were sent to us by "professional" photographers who felt that they knew what they were doing. In fact most didn't know about curve shapes at all.
Most times they were off a mile. Not only didn't the overall contrast meet the requirements for the process, but they were out of contrast balance to each other.
I had to make contrast reducing masks for each negative, in different amounts of contrast so that when the final sets were assembled, they matched each other in contrast, if not density.
Then along came the Dye Transfer process.
We all blindly followed the prescribed information that came packed with the matrix film, and searched in vain for some kind of information about the making of separation negatives from transparencies.
Eventually, some early pioneers in the field of Dye Transfer began to make prints that were of a higher quality than the rest of us.
As all things happen, news about their methods became known to the rest of the technicians and this is where

things began to happen.

I dedcided to follow the method prescribed by "Evans and Peterson" one of the finest labs in New York City at this time in history. I worked for them during the late '40's.
I eventually decided then to anylize my own systems and came up with the current one.
I knew that If my transparencies were brought to the correct contrast before I made my separation negatives, that I could make my negatives to a specific gamma and always come up with the correct contrast in my finished print. It worked.
I decided to find out if it would work with any other process. I found that it did.
I began to make black and white negatives from color slides. I managed to find out what degree of contrast my enlarger required in order to make great prints.
Then along came Cibachrome.
My first attempts with the process were disastrous. The new material was slow. Too slow to make contrast masks. I increased my enlarger speed by using a Zenomega, a Pulsed xenon light source. But eventually, the new paper was availabe. I tried it and found that it too, needed contrast control.
I found that my enlarger produced a specific amount of contrast with the new material and with their new chemistry.
I decided to make contrast masks to the exact degree of contrast so that my prints would exhibit all of the detail in the shadows and highlight areas without looking false. It worked.

What this whole story is about is this. Every transparency will be different. Since it is possible to make a contrast mask that will exactly fit the contrast requirements of the transparency, why fool around with systems that are based on quesswork or luck.
I realize that some people don't want to fool around with densitometers or even handle film in a tray. These same people probably want a camera with totally automatic controls. To these people I say, don't bother with making prints. Just bring them to the drug store and hope for the best.
To the people that would like to play around with chemical controls, or photo sensitive glass, you can find ads in "Darkroom Techniques" and "Darkroom Magazine" that will fill your desires.

I hope I haven't garnered this kind of audience.

In other words, learn how to control your contrast with any process by masking. It is simple and very accurate.

I recently recieved a booklet from **Morry Bard,** perhaps the most informed individual in regards to the dyes used in the Dye Transfer process. The book is full of detailed information about dyeing times, dye fastness, and color purity.
He has his own formulas for dyes, conditioners, developers, fixers, and even formulas from the early days of "Wash Off Relief."
If you are interested in saving money. this phamplet is for you.
If you are interested in learning more about this fascinating process, then this phamplet is even more for you.
The formulas work and he is very free with his information.
I recommend this phamplet very highly. The cost is $11.95 and well worth it.

To reach Morry Bard,

Bard Experimental Enterprises
Dye Transfer Photography
469 S.W. Fagler Ave.
Pompano Beach, FL 33060
Phone: 305 781 1927

For those of you who do not have a densitometer and want to make Dye Transfer prints, I have a solution for you.
You can make prints like I did in the early days of the process.

Here is what I did.
Mount the transparency into a larger sheet of film so that a 21 step grey scale can be inserted along one edge of the transparency. This will be used as a guide.

I first made a mask by contact through a red 29 filter using Kodak's Pan Masking film. I also made a mask by contact with a green 61 filter with about three times the red exposure.
You will have to experiment. Make the red mask exposure long enough so that detail in the shadow area just begins to show.
I used the developing and exposure information that came with the film. The mask is made to approximately 25%. If it isn't 25% don't worry about it. Since you won't be using a densitometer you wouldn't know the difference.

The object here is to **use your eyes.**
Place the red filter mask in contact with the original transparency. Make sure that you have oriented the set in such a way so that the emulsion of the transparency is free and can be placed in contact with the separation negative material. You can use a mutlitude of films for the separations, however, I recommend using either Kodak's Super XX or T Max 100 films. Both are very sensitive to all colors and will work fine.
Look at the red filter separation negative after you have exposed and processed it. If you have any experience with producing good quality black and white negatives, you will know what to look for. Make sure that there is detail in the shadows and that the highlights are not blocked up.

If your contrast is too high or too low, use the different proportions of A to B of the tanning developer to make contrast adjustments.

Remember, you have a 21 step grey scale to look at and to use as a comparison for the other two negatives. Once you make a set of negatives where all of the grey scales look alike, write down the exposures and the developing times. Use these times when ever you attempt to make another set. This isn't the best way, but a short cut and a compromise.

Is this the proper way to make a set of negatives?
No it isn't, but without a densitometer there is little choice.
Highlight masks are a very important part of the process. However, with this simplified method, just make one very short exposure from the transparency, by contact, on Kodalith ortho film, and process it so that you can add this sheet of film to the negatives in the enlarger, one at a time.

In my previous newsletters I have described a method of making a very inexpensive grey scale using a calibrated grey scale as the comparison. This will put you into a much closer area for making good negatives.
What about making the matrices?
Believe it or not. The first 15 years that I was involved with making Dye Transfer prints, there were no qualified easel meters that could have made life easier. I used the "bromide" system.
Using any good quality black and white paper and Kodak's Dektol developer, and using the red filter separation negative, I would make a print (we called them bromides after the carbro method) until it looked like a good print. We aimed primarilly for the correct density. Use a red filter (29) and compare the print to the transparency.
Make sure that somewhere in the picture there exists an area that we can consider neutral.
Then make prints from the other two separation negatives and compare the neutral area with the first image. Make them over and over until they match. Keep a record of the exposures. Then when you are satisfied that they cannot get any closer, stop and make a

series of strip exposures from the red filter negative (the cyan printer.)
Process the strip test in the normal proportion of A and B Tanning developer for 2:30 min .at 68°, then stop bath (1% acetic acid) for 45 seconds, then into a non hardening fixer (such As C 41 fixer) until clear.
Hot water until clean, then place into a tray containing cyan dye for 5 minutes.
Then proceed to rinse and transfer the image to a sheet of prepared Dye Transfer paper.
After transferring, look at the black and white cyan printer and compare it to the cyan images. Use a red 29 filter to examine both of these images at the same time.
When you feel that you have matched one of the cyan images to the original black and white paper print, record which exposure produced it.
Divide the black and white exposure time into the exposure time for the matrix exposure. The resulting answer is the **factor.**
Use this factor whenever you want to make a set of "bromides" before making a set of matrices.
The technique is to make a set of paper bromides until you are satisfied with the results. Then multiply these three exposures by the factor and you will have the necessary three exposures for the matrix films.
Using a system such as this will teach you more about separation negatives and densitometry than any book ever could. You will be able to see, immediately, the results of your negative making.

There is one serious fly in the ointment here.
The correct temperature and condition of strength of the Dektol developer is very critical. If you are off in temperature or strength, producing your matrices will become an exercise in futility.
One solution is to mix your chemistry fresh, each time, just before using it. Keep careful control of the temperature, and count the sheets so you will not exhaust the mix too soon.

Another solution is to purchase an inexpensive stabilzation processor.

Spiratone, of New York City, sells such a processor for under $200. It uses the same chemistry that the Kodak processor uses. It requires no plumbing or temperature consideration. I have used such a processor for many years. It works fine.

Making black and white prints from color transparencies.
I have mentioned this before. It is probably the best way to make quality black and white prints.
Remember, the black and white film used in your camera can only be exposed once. The choice of filtration (if any) will be insufficient when used to open an area, or to define an image.
The color sensitivity is locked in and cannot be manipulated in any way.
The ability to look at the image and wonder if part of the exposure could be made through a specific filter and the rest of the exposure through another filter will be non existent when working in the field with your camera on a tripod. It requires a darkroom environment.
With the image already produced on a sheet of color film, which carries more detail and information than a black and white negative, you will be able to use your wits and imagination and decide on the kind of separation you want on this new sheet of black and white film and eventually, black and white paper.
You can choose to lighten or darken a sky, lighten or darken leaves in a tree, brighten the highlights in a stream, or increase the contrast so that blacks will really print black.
All of the choices that you can make can be done under choice conditions. The overall contrast of the image can be produced to match the optimum output of the paper. You can imerse the original transparency and

masks in an oil bath in order to eliminate any abrasions or scatches in the original, as well as further increase the detail in the print by using a condenser enlarger to make the new negative.
The choices are many as compared to just shooting the original in a camera and trying to make a great print with just the original negative and dodging or burning.

The creative juices will really begin to flow, once you have mastered the art of darkroom magic.

I have made black and white prints from a 35mm color slide and would defy anyone to tell me what size camera I used to make the original image.

There have been many discussions about the use of a small camera when shooting scenics. Most of the professionals use a 4x5 camera or larger in the hopes of getting more detail without grain. There is no question about the ability of the larger camera for producing a more defined image. The 8x10 image is fantastic.
I remember shooting an 8x10 image of the area in California called Red Rock Canyon. It looks as if Walt Disney designed the area. The rock formations and the overall color of the area looks almost magical.

I also shot quite a few 35mm transparencies of the same location. I made Dye Transfer prints from both size transparencies.
Thje 8x10 image was shot on the then current Ektachrome film and looked great. I used a skylight filter to separate the image from the sky just a bit more.
The resulting print was fine. All of the details are there.
My only regret is that I could only afford a few exposures of this image. The film costs are quite high, as you must know.
I shot more than two rolls of Kodachrome film and found that I was able to use a Polaroid filter to separate the image even better from the sky and experiment with different levels of exposure in order to find one very exciting image.
I made a Dye Transfer from this image as well.
True, the 8x10 version had more detail, however, the 35mm image also looked great. I made enlarged separations in order to elininate the grain problem. The details were more than adaquate.
So, for those of you who are inspired by the incredible ability of Galen Rowell or the professionalism of John Sexton, take heart. It is not the size of the camera but the size of your imagination.

One of my subscribers to my Dye Transfer Video and book and my newsletters, (Gerard Aniere) has sent me a book about Carbon printing. It is entitled "Modern Carbon Printing" by Luis Nadeau.
If you are interested in the new Carbro process invented by Charles Berger, first read this book by Luis Nadeau. It will give you a more interesting insight to this process.
Thank you, Gerard.

The old process had it's good and it's bad points.
The fact that a black and white silver image was used to produce the hardened image by combining the paper silver print with the pre-sensitized color pigment has disappeared from the scene. No one now makes such a great black and white paper.
The new method is to actually produce a full size negative so that you can contact expose the negative directly onto the sensitized pigment, using a contact frame such as those used in the graphic arts field.
The negative image must be made in a screen form. The process is virtually a line image system such as newspaper or magazine printing.
The trick with the new system is that the negatives must be made to size. Once you have chosen a print size, you are locked in. Youi can't change sizes without

making another set of negatives. Make sure of the size before you make an investment for screened negatives. Charles berger uses a firm in Portland, Oregon called Wy'East. They have a top line scanner and are able to produce a set of screened separations with a 450 line screen. This is about as fine as you will ever need to be. You will have to use a loop in order to find the screen.
I don't know how the new Carbro process is faring. It is a rather expensive process and is not being produced for the tinkerer. The materials can be purchased directly from :

Charles Berger
Ultrastable Color Systems
PO Box V 2
Felton, CA
408-335-2169

I am sure that he will supply you with the material and the working script so that you can experiment with the process. The most expensive item you will have to purchase is a Contact Plate Maker. I have seen used ones advertised for under $600, in the California magazine called "Horse Trader."
You will not need an enlarger.
But you will need a set of 4 scanned screened separation negatives. With these negatives, you will need a loop to examine them or to see the screen.
If you purchase less expensive screened negatives, you will see the screen.

The filed of digitizing images has taken a giant leap foward.
In the immediate past, in order to get involved in this new field of image control, you had to have enough financial resources to even think about it. However, the scanner people have invited the different computer companies to use their programs and to be able to enter the color retouching field. It is almost scary. The prices are beginning to tumble.

I venture to say that any qualified lab with at least 5 employes can afford to get involved with these new systems.
Just recently, three new retouching programs have been introduced that will enable any person with taste, the ability to scan a color image, (print or transparency) place it on a screen, and with the proper tools retouch it, silhouette it, re-locate it into another background, and so on.
The programs are, PhotoMac, Photoshop, and Color Studio. These programs will enable one to do extensive retouching and to create realistic and fantastic montages involving hundreds of separate pictures.
It is possible to soften the edge of an image, change it's color, shape and so many other things, that it mimics a darkroom technician.
In less time than you can imagine, changes in image detail, contrast, brightness, and form can be manipulated to make startling changes. All this without a darkroom. It is almost sacrilegious.

I recently mentioned the work of Joe Holmes. His work is outstanding. Not only does he have the eye and heart of a poet and painter, but the brain of a scientist. The light source that he has invented is so complicated that only he could explain it. I asked him to write an article for me to include in a future edition of this newsletter.

Just to give you an idea of the light source's complexity, he uses 3 different "filters for the red, 5 for the green and 5 for the blue. The filters are dichroic, and involve the use of cut off filters and special electronics.

His book is also outstanding.

The reproductions are great. I had the opportunity to see the original prints and the reproduction in the book, side by side. They are just great.

The publisher of his book is:

The Nature Co.
Po Box 2310
Berkely, CA 94702
1-800-227-1114

The book is beatufully printed and the deluxe edition is boxed.

There are a number of up and coming photographers whose works have been getting rave reviews. I happen to be acquainted with some of them and can vouch for their ability with a camera.
One of them is Steve Solinsky of Nevada City, CA. He has been well known for his ability to shoot color negatives and his production of spectacular C prints. He manages to use light as I have never seen it used before. He took theThe Dye Transfer course with me for a full week and a few days. He is in the process of converting his studio into a Dye Lab. However, most of his work has been shot in color negative. He will have to convert his images into something he can use to make separation negatives. I have made a conversion for him by using Vericolor Print film in order to make a transarency. The resulting print was excellent.

The image produced by the transparency had the same or better color quality than did the C print. The reasons are obvious. The image and color quality of the Vericiolor print film is better that that of the Ektacolor paper (C Print.)
If the original negative was dodged or burned in order to make a great print, the same technique can be used to produce the finished transparency.
Then the normal conventional systems can be used to produce the separation negatives, matrices, and the final print.
There is nothing wrong with this approach. Some people feel that there is a loss in using this techniique. I disagree. The loss is negligble. Using a system where the original negative is first converted to black and white positives and then back to separation negatives again, is much more prone to image distortion than anything else.
Kodak has just published a new phamplet on this particular subject called E 81 N. It is an article first proposed by my old friend Tom Rankin, of Frog Prince, San Francisco. It has been further edited and written by Ctein of Daly City CA.
It details the procedure of making separation negatives from an original color negative.
Kodak was kind enough to include my name and a reference to my materials on Dye Transfer.

Thank you, Kodak.

As you must know by now, Mary and I have moved to Green Valley (Henderson) Nevada. I will continue to write my newsletters and publishing my various books and videos. In other words, I am still quite active in my photographic pursuits.

During the next month, I will announce my starting a new concept.
A home study course.
The courses will include Dye Transfer and Cibachrome printing.
The course will include my books and tape and an additional 15 lessons that will be tailored directly to the students capabilities.
I will prepare each lesson so that the student will have to complete it before going on to the next lesson. I will keep in touch with the student by mail, fax, audio tape, and, if necessary, by video tape.
There will be no deadline for each lesson.
The time for the course is really up to the student. There is no rush.
The biggest advantage is that it will almost be like having me there, at your side, guiding you along.
I will alert you when I am ready.

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