

SCSH CAMERA CLUB

ADVANCED PHOTOGRAPHY AND PROCESSING (“APP”)

2022-12-16 APP Presentation - Black & White Image Basics - Outline and Resources

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1. INTRODUCTION TO BLACK & WHITE

1.1. Basics Today. You all know what a black & white image is. Many of you have substantial experience shooting in black & white with film cameras or converting digital color images to black & white. Today, I’m going back to basics on black & white. I hope all will learn something, even if it is only a nugget or two for the more experienced.

1.2. What is it? Black & white is also sometimes called grayscale or monochrome. None of those terms is very accurate. What we call a black & white image will contain many more tones than just black and white. And it need not be colorless gray. Nevertheless, when we speak of a black & white image, to paraphrase Justice Potter Stewart, we all know one when we see it.

2. WAYS TO CREATE BLACK & WHITE IMAGES

2.1. Shoot a film camera with black & white film.

2.2. Use in-camera black & white settings with a digital camera.

2.3. Convert a digital color image to a black & white image.

3. BLACK & WHITE FILM

3.1. Yes, it is still available. B&H carries 108 types of 35mm black & white film.

3.2. Probably many or all of us did at least some black & white film shooting at one point.

3.3. Now, decidedly a niche. Let me know if you wish to explore further. We can all get out our film cameras, buy some film and give it a go. And figure out how to get the images processed and printed (or processed, digitized and printed).

4. IN-CAMERA DIGITAL BLACK & WHITE IMAGES

4.1. Most digital cameras have settings to take images in black & white.

4.2. My Canon 5D MkIV lets me select “Monochrome” as my Picture Style and set sharpness, contrast, filter effect (I can select a yellow, orange, red or green filter) and toning effect (sepia, blue, purple or green).

4.3. If you wish to try this, check out your camera manual or third party reference book to learn how. Play with the various filters and toning effects.

5. CONVERTING A DIGITAL COLOR IMAGE TO BLACK & WHITE

5.1. This is the way most of us now are going to end up with black & white images. If you haven’t already, give this a try. Many color images look great in black & white.

5.2. First, what not to do:

5.2.1. In converting to black & white, we are not just eliminating color. If we simply desaturate a color photo, it will be black & white, but not necessarily very appealing.

5.2.2. That is because, if we simply desaturate, if two colors in the image reflect the same amount of light, they will be indistinguishable in the black & white image.

5.2.3. For example, in Lightroom, if we go to the HSL module and move all the color sliders to minus 100.

5.2.4. Similarly, in Photoshop, we could add an HSL Adjustment Layer and then move the master saturation slider (or the individual color sliders) to minus 100. Again, we have grayscale, but no separation of the underlying colors.

5.2.5. Or, in Photoshop, we could change the mode of the image to grayscale (Image > Mode > Grayscale). Here you even get a warning: “Discard color information?” As we will see, we need the underlying color

information in our image for our black & white conversion, so we certainly don't want to discard it.

5.3. Second, what you want to do in conversion:

5.3.1. Instead of desaturation, think of conversion to black & white as converting (or mapping) colors to tones.

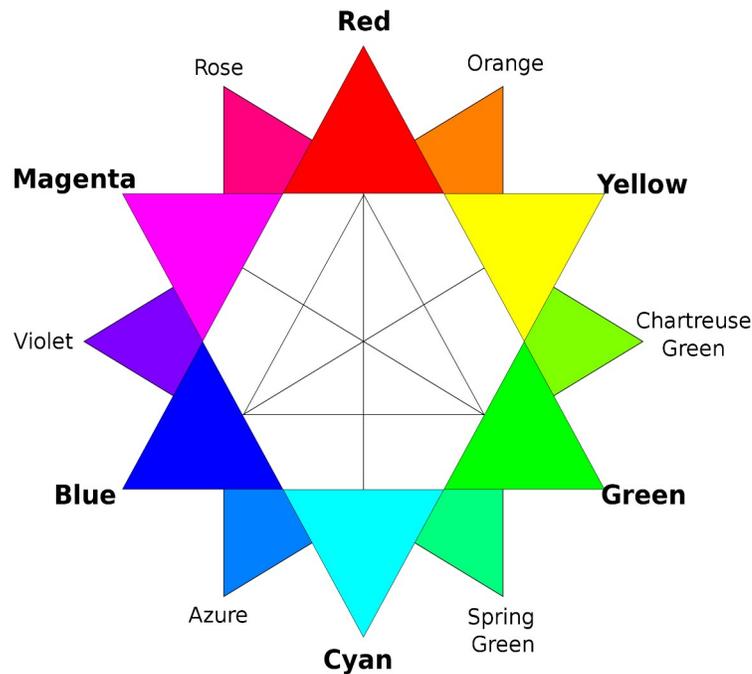
5.3.2. When you do a conversion, you are making a subjective decision of how each color will be shown as a discrete shade along the black to white continuum.

5.3.3. Keep in mind that there is no "correct" way to do the conversion. The important thing is realizing your vision for the resulting image.

5.3.4. Also keep in mind that color remains essential to the conversion process. Remember that you are mapping different colors to different tones to achieve separation.

5.3.5. Basically, in doing the conversion, we are using digital filters that allow colors to pass through in differing degrees.

5.3.6. Filters pass most of the light that is the same color as the filter and block to the highest degree colors that are opposite of the filter color on a color wheel.



5.3.7. 5.3.7. To avoid artifacts such as banding and posterization, it is even more important when making black & white images to work in 16 bit format. Check your settings in Lightroom and make sure that you are set to send your images to Photoshop or another external editor in the ProPhoto RGB or Adobe RGB (1998) color space and with a 16 bits per component bit depth.

5.3.8. Before doing a conversion, consider whether initial adjustments in Lightroom may enhance your result. Try adjustments to White Balance in the Basic Tab, adjustments in the HSL Tab or Calibration Tab adjustments.

6. APPS FOR CONVERSION

- 6.1. I suspect that all photo processing software applications have at least one way, and perhaps multiple ways, to convert an image.
- 6.2. In addition, there are conversion plug-ins that one can use for conversion. NIK collection Silver Efex Pro is an example. I don't own the current version, or even the last one, but in past years I have used the free version most of us had or have.
- 6.3. Today, I will demonstrate conversion methods in Lightroom and Photoshop. If you use other apps for processing, check yours out to see how to do conversions.

7. CONVERSION IN LIGHTROOM

7.1. Introduction

- 7.1.1. Demo Photo: Here is a bad photo of a bird in the Lorikeet cage at The Living Desert I shot several years ago. It was the first photo I found in my Lightroom catalog that had lots of red, blue and green for demonstration purposes.
- 7.1.2. Lightroom Don't: As stated above, you don't want to just remove saturation using the HSL sliders.
- 7.1.3. Using the demo photo, see how the green and blue colors are mapped to nearly identical tones in the desaturated black & white.

7.2. Method One – Select the Basic Monochrome Profile

- 7.2.1. In the Develop Module under the Basic Tab, for Treatment, choose “Black & White” instead of “Color.” Notice that just below, the Profile changes from “Color” to “Black & White.” (Alternatively, choose the “Black & White” Profile; the Treatment changes to “Black & White”).
- 7.2.2. Using either method of selecting the basic Monochrome Profile, you now have a black & white image.
- 7.2.3. And now, instead of the HSL/Color Tab, you will have a B&W Tab.

- 7.2.4. Under the B&W Tab, you can adjust the individual colors using the sliders or the Targeted Adjustment Tool (“TAT”) (click on the tool, then find color in photo, left click and move up or down to adjust.
- 7.3. Method Two – Select one of the Black & White Profiles
 - 7.3.1. In the Develop Module, under the Basic Tab, click the four boxes on the right of Profile. Now drop down to the 17 Black & White profiles and choose one of Adobe’s 12 profiles or one of the 5 color filter profiles.
 - 7.3.2. Close the Profile selector. You now have a black & white image based on the profile you have selected.
 - 7.3.3. And, as with the Basic Monochrome Profile, you now have a Black & White Tab (instead of the HSL/Color Tab) where you can further adjust the individual colors with the TAT or sliders.
 - 7.3.4. Note: There may also be “Camera Matching” Profiles available, including one or more Monochrome Camera Matching profiles (depending on your camera). It is my understanding that these don’t exactly match the camera profiles from the camera manufacturer, because Adobe doesn’t have access to those profiles. Instead, Adobe tries to come as close as it can to the profile the camera manufacturer assigns to the JPEG image embedded in your Raw file when you chose a picture style in your camera menu. Note that you likely will NOT have the B&W tab available to you if you choose a Monochrome Camera Matching Profile so you will not be able to make further adjustments to the tones of individual colors. So, in most cases using a Black & White Profile (see above) will be preferable.
- 7.4. Method Three – Select a Black & White Preset
 - 7.4.1. In the Develop Module under the Basic Tab, leave the Treatment as “Color” (this really doesn’t make any difference) and go to “Presets” on the left panel.
 - 7.4.2. There are black & white presets in three areas here: “Portraits: Black & White;” “Style: Black & White;” and “B&W.”
 - 7.4.3. See the change to your image as you hover your mouse over the various presets.
 - 7.4.4. Pick a preset to apply it. Now, see what has happened in the right panel:

- 7.4.4.1. The Profile is now either Monochrome or a specific black & white profile;
- 7.4.4.2. The sliders in the Basic Tab may have moved; and
- 7.4.4.3. The sliders in the Black & White Tab will have moved.
- 7.4.5. You still have some leeway to further adjust the tone and color sliders. Note that using a preset will always make the initial processing easier while reducing your control and creativity in making the final image.

8. CONVERSION IN PHOTOSHOP

8.1. Introduction

- 8.1.1. Demo Photo: Here is a focused stacked, juiced up photo of Bell Rock outside of Sedona, Arizona that I took while on a photo workshop back in 2015. I chose it for the blue sky, reddish rock and yellow-green foliage.
- 8.1.2. Photoshop Don't Number One: As with Lightroom, in we simply desaturate using an HSL adjustment layer, we get similar results: our red rocks and yellow-green foliage take on similar tones in the black & white.
- 8.1.3. Photoshop Don't Number Two: See the warning if we go to simply switch the mode of the image to grayscale (Image > Mode > Grayscale). "Discard color information? To control the conversion, use Image > Adjustments > Black & White." This is simply telling us to use a Black & White Adjustment Layer (which we can add to our layer stack in various ways).

8.2. Conversion in Photoshop using a Black & White Adjustment Layer:

- 8.2.1. Open the photo in Photoshop
- 8.2.2. Add a Black & White Adjustment Layer (I'll use the TK8 plug in panel)
- 8.2.3. You can now click the "auto" button to see what Photoshop thinks your image needs.
- 8.2.4. Or, under "preset" you can pick either "Default" or one of the color or other filters under the drop down menu.

- 8.2.5. Use the sliders or the Targeted Adjustment Tool to further adjust colors.
- 8.2.6. Notice that in Photoshop, we have the option to apply a mask to our Black & White Adjustment Layer so that our conversion covers only a portion of the photo. For example, if we add a white mask, then paint on the mask with a black brush at 100% opacity, the areas we paint retain their color.
- 8.2.7. Or, we can mask off portions of the image and use multiple Black & White Adjustment Layers to convert areas with different adjustments (for example, converting the sky and landscape differently).
- 8.2.8. And, we have all the other Photoshop tools (curves, levels, etc.) to make further adjustments.
- 8.3. Blake Rudis Four Step Photoshop Conversion
 - 8.3.1. For another conversion method in Photoshop, see the Blake Rudis (f64 Academy) YouTube video listed in the References, below.
 - 8.3.2. Blake converts with:
 - 8.3.2.1. A black to white gradient for the conversion at the top of the layer stack;
 - 8.3.2.2. Three color adjustment layers under the gradient to control the underlying colors
 - 8.3.2.2.1. An HSL Adjustment Layer to shift colors;
 - 8.3.2.2.2. A Selective Color Adjustment Layer to refine colors; and
 - 8.3.2.2.3. A Color Balance Adjustment Layer to balance colors.
 - 8.3.3. Blake gives you a Photoshop action that you can download to easily add all four layers to your layer stack
 - 8.3.4. I haven't studied Blake's method, but with a quick view it appears to give much more control over the single Black & White Adjustment Layer method.

9. Resources

- 9.1. Photoshop:

- 9.1.1. Guy Tal, The Landscape Photographer's Guide to Photoshop, RockyNook, 2018, pp 209-225.
- 9.1.2. Blake Rudis YouTube – Foolproof 4 Step Black and White Photos! <https://www.youtube.com/watch?v=aSS1LU3yTDY>
- 9.1.3. Joel Grimes YouTube - The Ultimate black & white conversion for a Dramatic look https://www.youtube.com/watch?v=z4HYksU_7Tg
- 9.2. Lightroom:
 - 9.2.1. Alister Benn – Expressive Photography YouTube – How to Perfect Black & White Landscapes Without Presets (1st in series) - <https://www.youtube.com/watch?v=w0kymyxNCPA&t=29s>
 - 9.2.2. Alister Benn – Expressive Photography YouTube – Creative Black and White landscape Photography in Adobe Lightroom (2nd in series) <https://www.youtube.com/watch?v=HXQHHRhor3o&list=PLusthZgTzTiz8uGtUIT-S-SFULLEQvY8C&index=9>
 - 9.2.3. Anthony Morganti YouTube – Ten Steps to Black & White in LIGHTROOM: https://www.youtube.com/watch?v=_xM6hq2TxOI
 - 9.2.4. Adorama TV – 7 Step Advanced Black & White Editing in Lightroom: <https://www.youtube.com/watch?v=itw37I51LAg>
 - 9.2.5. Serge Ramelli YouTube – From Boring to Dramatic black and white in Lightroom 2021: https://www.youtube.com/watch?v=158-ZU_53KY