



Photoshop Mastery

Taking Photoshop to the next level

BY BEN WILLMORE

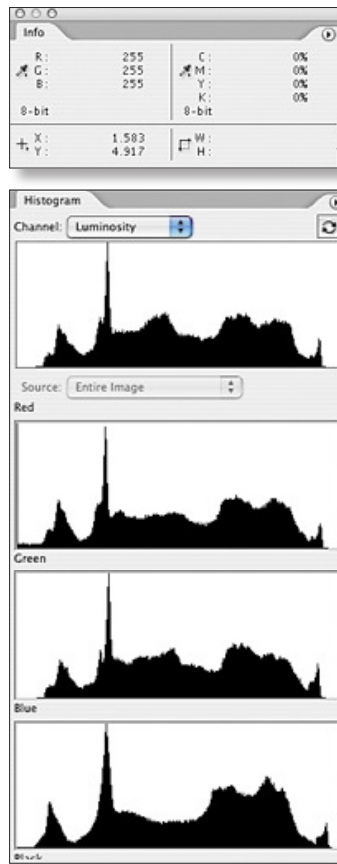
Learning from Histograms

Teaching online classes at www.BetterPhoto.com has required me to inspect and critique hundreds of images each week. Through that process, I've refined my knowledge of histograms and can now quickly evaluate problems and provide useful solutions. Let me share with you what I've learned.

In teaching the online class, I noticed that it was very common for students to skip steps in the techniques I was trying to teach them. Of course, their images usually suffered and it would take me awhile to figure out why (I had mistakenly assumed they were following all of my instructions). So, I came up with a few evaluation techniques to quickly assess an image.

I found that the Histogram palette (Window>Histogram) is indispensable in the evaluation process; but to make it really useful, you need to set it up properly. Starting from the default setup, make the following choices from its flyout menu (top-right arrow in the Histogram palette): Expanded View, All Channels View, and Show Statistics (to toggle off the statistics readout). Next, set the Channel menu at the top of the palette to Luminosity. Finally, click on the Histogram tab at the top of the palette and precisely drag it to the bottom edge of the Info palette until a short, wide, black rectangle appears (indicating that the two palettes will stack together). Now let's look at how this setup (shown) can help you evaluate your images.

We can use the top (Channel) histogram to determine if detail has been lost in the darkest or brightest areas of the image. For example, a spike on the left edge of the histogram (when it's set to Luminosity instead of the default RGB) indicates that the image contains areas of solid black. The taller the spike, the more prevalent black is within the image and therefore the less shadow detail the image contains. A spike on the right edge of the histogram indicates that white is prevalent in the image, and therefore the image lacks highlight detail. Spikes on the ends of the histogram indicate that either the exposure setting on the camera caused a loss of highlight or shadow detail or that



an aggressive adjustment was applied in Photoshop that caused a loss of detail. (Or the image contains an intense light source or direct reflection of that light source on a shiny surface, in which case it's okay to have no highlight detail.)

Next, we'll check for possible color casts, which usually indicate that steps were skipped while color-correcting an image. We do this by comparing the left and right ends of the Red, Green, and Blue histograms. If one of the histograms doesn't extend as far to the left as the others, then

you have a color cast in the dark areas of your image. In our example, the Blue histogram doesn't go as far to the left as the others, so this image would have a slight blue cast in the shadows.

If two of the histograms don't extend as far left as the third, then use the following chart to determine the color cast in your image:

- Red + Green = yellow color cast
- Red + Blue = magenta color cast
- Green + Blue = cyan color cast

If one of the histograms doesn't extend as far to the right as the others, then you have a color cast in the bright areas of your image. This time, however, the color cast will be the opposite of the histogram (i.e., the image doesn't have enough of that color and therefore looks like the opposite color). For instance, when you don't have enough red, things look cyan; not enough green makes things look magenta; and not enough blue makes things appear yellow. You can remember this by looking at the relationship between RGB and CYM in the Info palette. If two histograms don't extend as far to the right as the third, then use the following chart:

- Red + Green = blue color cast
- Red + Blue = green color cast
- Green + Blue = red color cast

This technique can often expose problems that aren't immediately apparent when viewing an image. ■

Ben Willmore is the author of Up to Speed: Photoshop CS2 and Photoshop CS Studio Techniques, and co-author of How to Wow: Photoshop for Photography. Currently, Ben is on tour with his "Photoshop for Photographers" seminar. To find out more and get a bunch of free tips, visit www.whereisben.com.