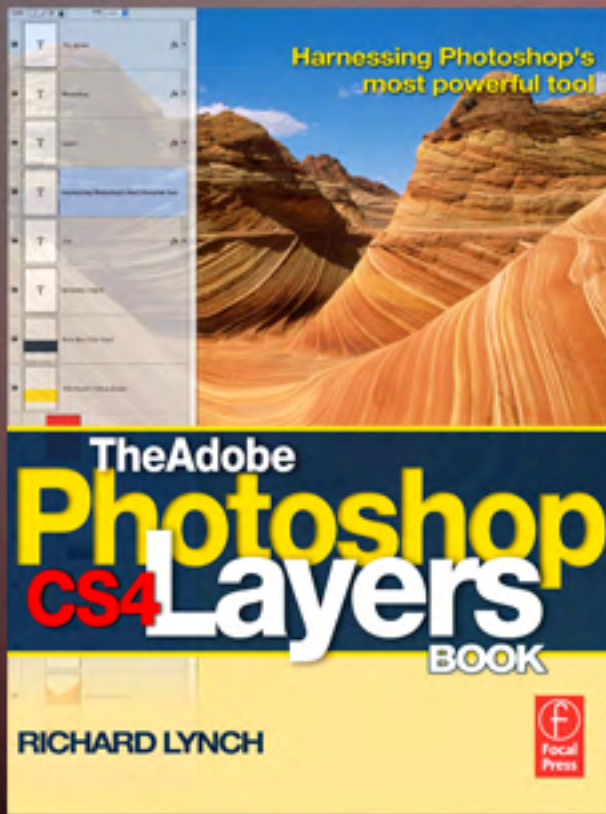


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Photoshop Layers Introduced

Object Area Isolation in Layers

One of the fundamental values of working in Layers is isolating image areas for change. This gives you the freedom to correct image areas independently and revisit changes as part of image development and work flow. Once you use layers to isolate changes, you can make adjustments and then fine-tune the adjustments in nondestructive ways that are impossible using selection alone.


Layers allow you to isolate changes in many different ways. In fact, the bulk of this book is really dedicated to describing how different layer features enable change in images. This chapter looks at the simplest concepts behind isolating change and the nondestructive editing work flow, including the purpose and use of Adjustment layers, and the idea of isolating objects and areas within images in the simplest form. As we go, we'll look at several key concepts for image correction that apply to just about any image you will work with to form the core of your correction work flow. This includes adjusting dynamic range, color correction, and color balance as an initial application of layers in your images.

The idea of light leaving a fingerprint is something I talk about to teach the idea behind the theory. If you talk with other people who are not familiar with this book about "light's fingerprint," there is a good chance they will have no idea what you are talking about, unless they have read this book or attended my classes.

Isolating Correction in Adjustment Layers

Adjustment layers are based on correction functions, but instead of applying the adjustments directly to the image, adjustment settings are retained in a separate layer that you can readjust later, temporarily hide, or even remove at any point in the processing. The ability to change your mind later is key to nondestructive work flows. The point again is that the correction or change remains distinct within the layer stack and never directly changes the original image pixel information.

One of the first steps that I suggest in working with any image is making a general Levels correction. The correction helps make the most of the dynamic range (brightness from white to black) and helps establish color balance that can bring out richness in image color. The technique of Levels correction applies to the whole image, but on occasion may apply to isolated image elements as well. In this case, the Levels correction is a useful way to demonstrate a simple application of Adjustment layers. This correction works on just about any image, and sometimes really works wonders.

 Corrections work better from general to specific. Instead of attacking specific issues first, be sure you have made good general corrections. This will keep you from making changes to multiple parts of an image when a general correction would have sufficed.

First, let's look at some background theory about how the correction works by learning something about what I call light's fingerprint.

Light's Fingerprint

When an exposure is captured, the camera captures a fingerprint of the lighting for the scene. Natural lighting at sunset or sunrise, when lighting tends to color objects with warmer tones of yellow and red, is an example of light creating an effect in a scene. But, taking that further, if your light is pure red, everything in the room will reflect only the red light, and everything (with any red in it to reflect) will appear red. Objects with no red at all will appear black.

Objects in a scene reflect the quality and color of the available light. If the light isn't completely neutral (with even amounts of red, green, and blue light), lacks full spectrum (absolute black to absolute white), tends to favor a particular color over a range of tone, and/or has multiple light influences (different colors of ambient and direct light, for example), the scene reflects those qualities of the light. As a scene can reflect only the colors in the original light source(s), a capture serves as a reliable fingerprint of the general qualities of the lighting in the scene.

This fingerprint is a valuable clue to detecting the correct color for your image. If you examine the fingerprint and learn how to read it, you can identify deficiency of the light, and you can correct image color.

Image Histograms (found by looking at the Histograms or by looking at the Levels dialog) are exactly what you need to evaluate the quality of the light and the fingerprint it has left on the scene. A histogram (see [Figures 3.1–3.3](#)) shows a definitive mapping of exactly how the light fingerprint reacts with the objects in the scene. By examining light's fingerprint as a clue, we can easily determine how to correct image color.

This Levels correction can work wonders on an image, and it is useful in almost any image. The changes compensate for exposure and lighting conditions and improve color balance and the dynamic range of images, without a lot of complicated measurement. In fact, in most instances you don't even have to look at the image to make the adjustment. The results are nondestructive, as the correction is made in layers. The following section outlines the details of how to make that levels change.

Detailing the Levels Slider Changes

Making the Levels slider adjustments is a fairly simple process, once you have an outline for what to do. The histogram on the Levels dialog will become your visual guide to all you need to know to make the basic adjustment. Additional changes can be made that reflect user preferences once you get used to using the tool.

The characteristic to look for in Levels histograms is shortened tonal range. Shortened tonal range is represented by a histogram that does not have information (or so little consistent information that it is more likely image noise than detail) across the entire range of the graph, with a gap at either the light end (right, highlights) or the dark end (left, shadows) of the graph or both. A shortened tonal range in any of the channel components indicates that the light source was not full spectrum.

Levels is an extraordinary tool for making adjustments in this situation. All you do to correct a shortened range is move the sliders (black/shadow and white/highlight) to maximize the range of each component. Move the right, white, slider to the left to a position at which the graph shows anything more than image noise; this will make whites brighter. Move the left, black, slider to the right, again to a position at which significant information is displayed in the graph; this will make shadows darker. See the examples in [Figures 3.1–3.3](#) for the Red, Green, and Blue channels.

After setting the sliders, you commit your changes by clicking OK on the Levels dialog. The tails and anything outside the range of the black and white sliders are cut off, and the image information will be redistributed over the tonal range. The new range of the graph is extended as in [Figure 3.4](#).

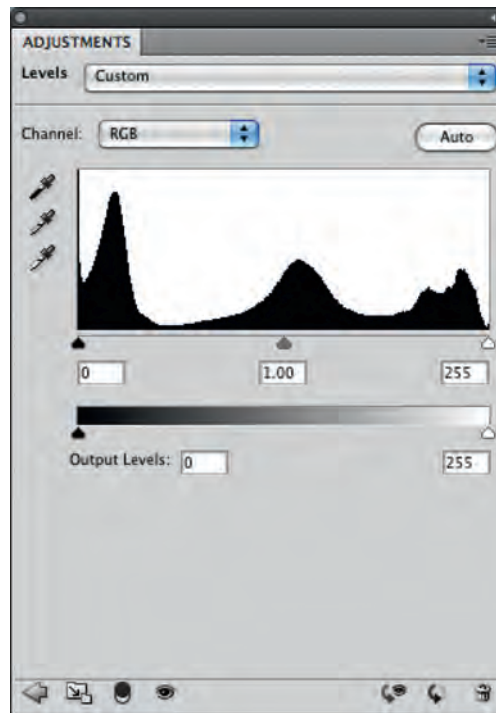


FIG 3.1 The Red histogram shows a full range from black to white and needs no adjustment.

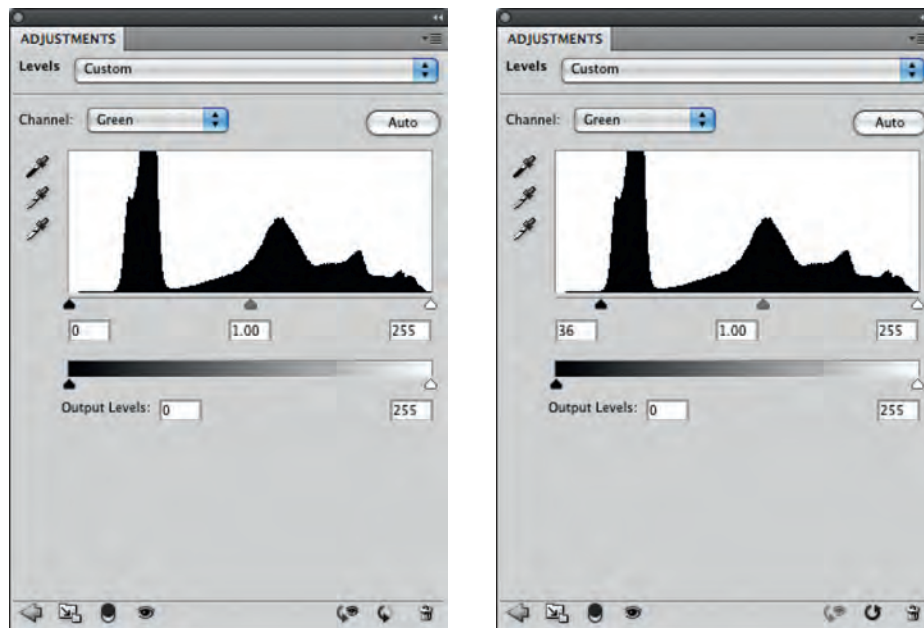


FIG 3.2 The Green channel shows a tail to the left, or shadow portion, of the green spectrum. To make the adjustment, move the black (left, input) slider to the right to compensate and clip the tail as shown.

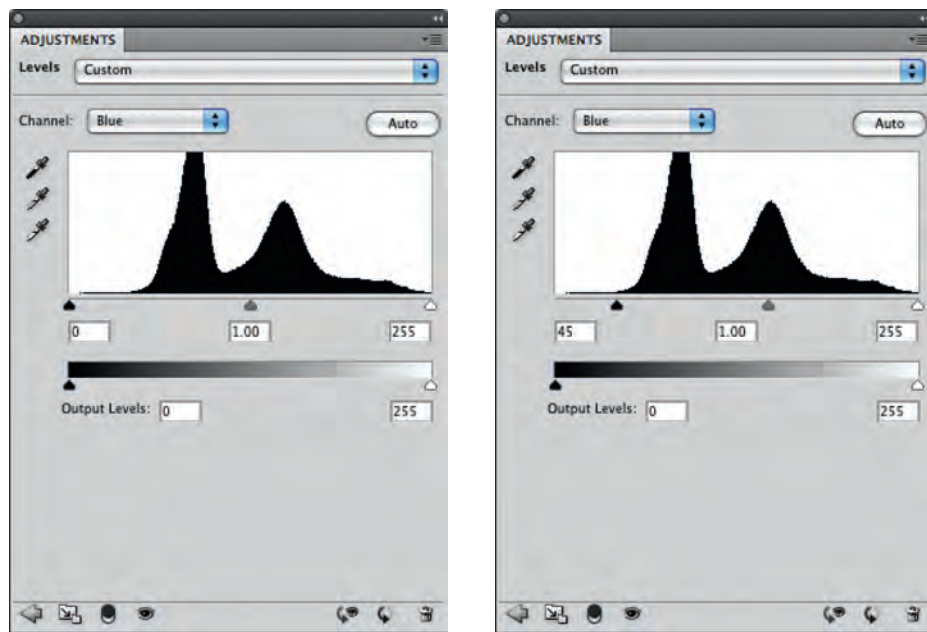


FIG 3.3 The Blue channel also shows a tail to the left, or shadow portion, of the spectrum. Move the black (left, input) slider to the right to compensate as shown.

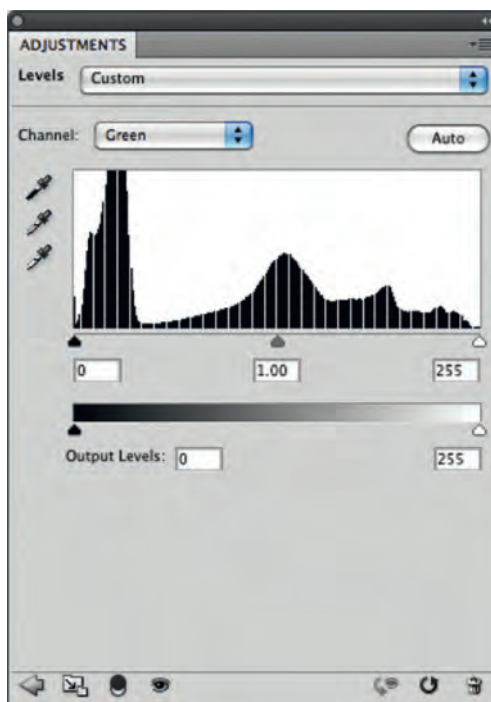


FIG 3.4 The image information is redistributed evenly after Levels changes are accepted so that the color range is broadened.