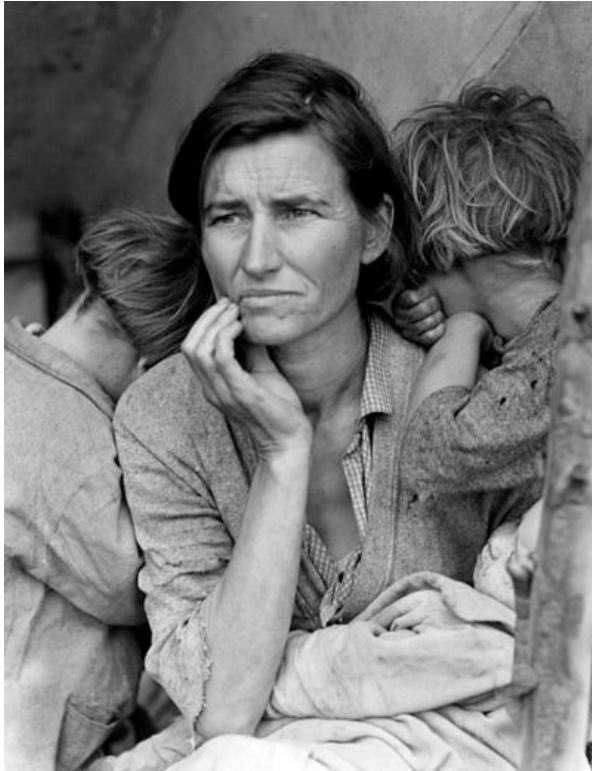


## 21 / TONAL SCALE<sup>1</sup>

In this section we'll be exploring tonal scale and how to adjust it using Photoshop to address common problems such as "blown out" highlights, murky images lacking contrast or a colorcast that is unwanted.



*Migrant Mother, Dorothea Lange, 1936.  
Silver gelatin print.<sup>2</sup>*

### TONAL VALUES

Dorothea Lange was among the photographers commissioned by the Farm Security Administration (FSA), part of a set of programs initiated by Franklin Delano Roosevelt to stimulate and revitalize weak economies from 1933 through 1938. They hired photographers including Dorothea Lange, Walker Evans, and Marion Post Wolcott to document

America after the Great Depression. Now these images are in the public domain and free for anyone to use.

Notice how the range of tonal values expresses the details in Florence's face and the blanket on her lap. The tonal scale in an image encompasses the changes in value from black to white.

### UNSHARP MASK

**A filter that is used to compensate for the loss of contrast by looking at edge areas where there is contrast and increases the contrast of those pixels.**

### USING UNSHARP MASK

Whenever an image is scanned or captured digitally, the process of digitizing 3D reality into a 2D digital file results in a loss of contrast. In this exercise you will learn how to recover detail using the unsharp mask filter in Photoshop. Later we'll address tone.

#### YOU WILL NEED:

- A computer running Photoshop CS6

<sup>1</sup> Adapted from *Digital Foundations* Chapter 08

<sup>2</sup> Image source : <http://en.wikipedia.org/wiki/Image:Lange-MigrantMother02.jpg>

- You may use your own image or the included PSD file for this exercise.

### STEPS:

1. Open the image you wish to work on. If you need a file we have included one of a purple flower by Fred Benenson.
2. Click Filters > Sharpen > Unsharp Mask. Be sure that the preview button in the Unsharp Mask dialog box is checked. Look at the image while clicking on the preview button. Unchecking the preview button displays the “before state” and checking the preview button reveals what the image will look like after the filter is applied. There are no set rules, but the guiding relationship is between the settings in this dialog box and file size.
3. As you adjust this setting look closely at your image. You will know when you’ve gone too far, the increased contrast will result in an image that looks pixilated and forced. Applying this filter should produce a minor modification. The larger the file size, the larger you will set the threshold, radius and amount. With smaller file sizes (anything less than 30 megs) you will probably leave the threshold at 0, the radius lower than 1.0 and adjust the percentage by eye between 20 and 250 percent.
4. If you used an image that needs to be rotated or cropped, make this adjustment now. To rotate the entire document 90 degrees or 180 degrees

choose Image > Rotate Canvas > and select the amount of rotation from the submenu. To crop the image, use the Crop Tool to click and drag around the area of the photograph that you intend to keep.

5. The Crop Tool displays the cropped area by setting a dark gray cast on the parts of the image that will be cropped out of the scene. Use the anchors along the side edges of the crop box to adjust where the crop box is located in relationship to the image.
6. When the crop area looks appropriate, press Return on the keypad or click on the checkmark in the Options palette to “commit current crop operation.”

### CROP TOOL STICKING?

**If it seems like the Crop Tool is sticking to the edges of your image, click on the anchor to readjust the crop area then hold down the CTRL key, which temporarily turns off “snapping” (a feature in the View menu that can be helpful when moving multiple objects into position). Let go of the mouse before letting go of CTRL.**

### HISTOGRAM LEVELS OF CURVES

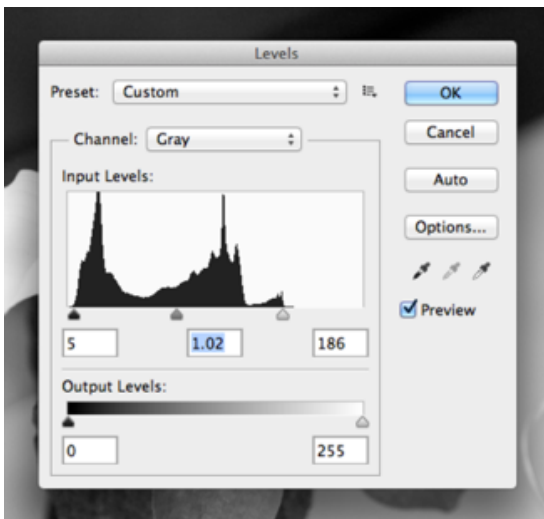
In this exercise we will work on the first steps of adjusting tone using levels.

#### YOU WILL NEED:

- Your file from the last exercise.

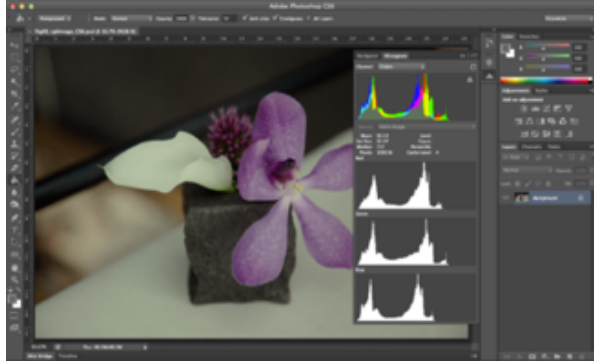
#### STEPS:

1. Click Image > Adjustments > Levels, which is used to control tonal adjustments specifically in the shadow and highlight areas. The Levels dialog box displays the histogram. At the left side, tonal information is presented for shadow areas, then mid-tones, followed by highlights on the right side. Moving the input level sliders (the small triangles just beneath the graph) to correspond to image areas where there is information on the left and right sides of the histogram readjusts where 100% black and 100% white occur within the image. Tonal manipulations occur as a result of adjusting the numbers associated with each slider. If the objective is to make the image look abstract through high contrast, push the sliders towards each other. If the objective is to make the image seem true to life, the sliders should be used carefully. Adjust the sliders to your taste and click OK.

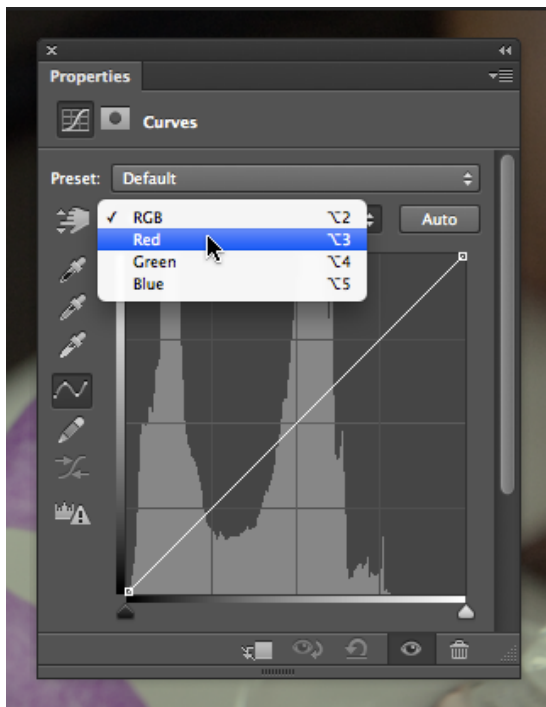


2. Open any image in RGB color mode (you can use your own color image or the image from the last exercise. Look at the Histogram palette to see information about the grayscale values in the image.

3. From the upper right pull-down menu in the Histogram palette, choose "All Channels View" to see the histogram for the composite RGB channel as well as the single red, green and blue channels that comprise the image. Even though the image is seen in color, the overall scale of gray values should be evaluated. Notice the graphs in the Histogram palette for each of the three separate channels (ask the same questions as we posed when evaluating a grayscale image. Where is information missing? Which areas contain a lot of information. Look at the individual histograms for the red, green, and blue channels. Notice that there is more highlight information in the red channel, while all three channels peak around the same point in the shadow areas. Also notice that the red channel has the most color information across the x-axis while the other two channels have steeper slopes towards the start and ending points of the curves.

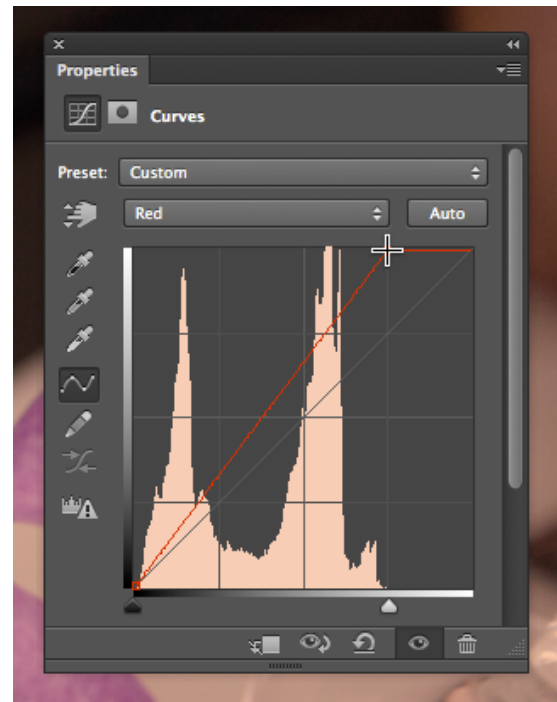


4. Click Image > Adjustments > Curves. Once again, the histogram is presented in the Curves dialog box. Curves, like Levels, can be used to adjust the tonal scale within the image.

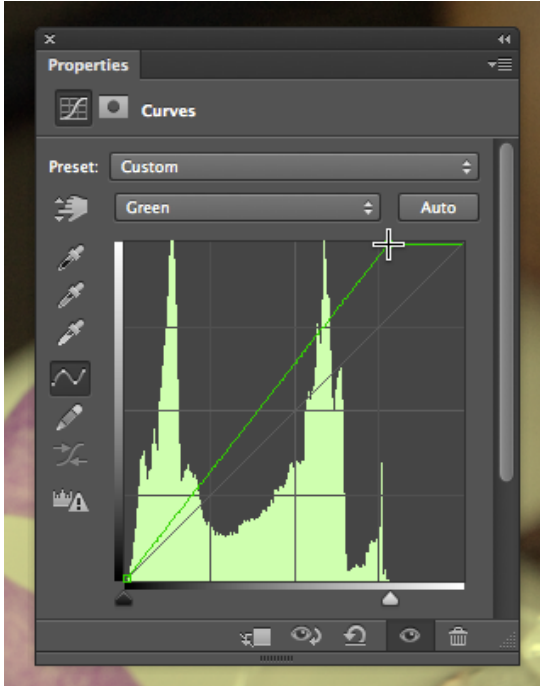


5. This time, don't touch the RGB composite histogram. Instead, adjust each of the red, green, and blue graphs so that there is image information where the deepest shadows and lightest highlights appear. To do this, start by using the

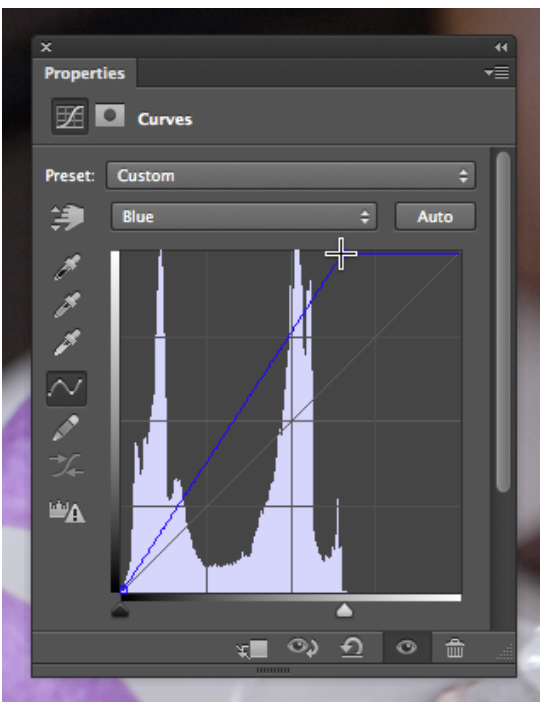
pull-down Channel menu from within the Curves dialog box to select "Red" (CMD+1). Use the input sliders on the left and right sides to move the edges of the endpoints of the line graph to the point where image information exists.



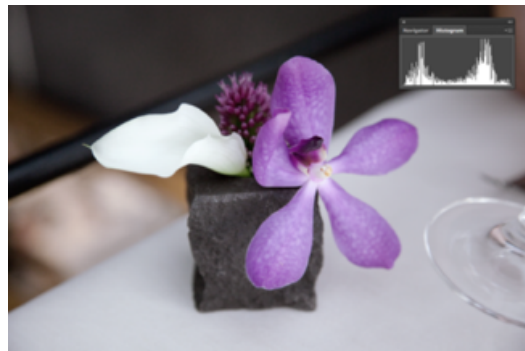
6. Use the pull-down Channel menu to select "Green" (CMD-2). Use the input sliders on the left and right sides to move the edges of the endpoints of the line graph to the point where image information exists.



7. Use the pull-down Channel menu to select "Blue" (CMD-3). Use the input sliders on the left and right sides to move the edges of the endpoints of the line graph to the point where image information exists.



8. Click OK. Adjusting the Curves (or Levels, either palette could have been used for this last exercise) manually for each color channel produces a better result than simply doing this one time for the composite RGB channel.
9. Notice the Histogram. It should show a graph with information that spans from the left side of the x-axis (shadows) to the right side (highlights).



10. The image on top is before the curves were altered and the image on the bottom has been modified. Information spans the entire x-axis on the histogram. Notice that the contrast is slightly modified, but the overall change to the image is slight. Be careful about pushing the sliders too far. The modifications should be minimal.



## SATURATION TARGETING LEVELS

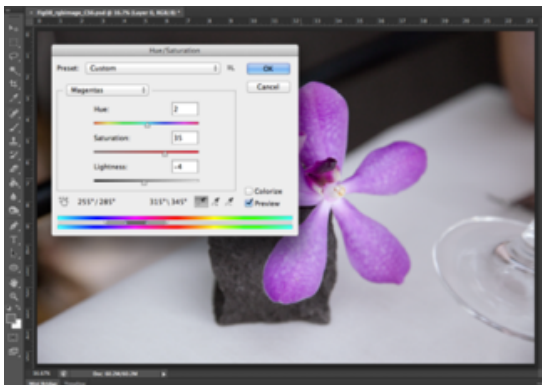
In this exercise you will use image > Adjustments > Hue/Saturation can be used to increase or decrease the saturation of specific hues within the image. This palette is often used to make a dominant color appear more vibrant within an image, but it is hard to notice if the image is not being viewed at 100 percent. If you are using the file included on the disk, the following details are the adjustments that we made on the file to demonstrate this concept.

### YOU WILL NEED:

- The image from the previous exercises or your own image.

### STEPS:

1. Click Image > Adjustments > Hue/Saturation. Use the pull-down palette on the word, "Master," to work specifically on the magenta areas of the image.



2. Use the Saturation and Lightness sliders to modify the image. The image above demonstrates our settings, but remember that our

monitors may be calibrated differently. It is best to eyeball these numbers, rather than follow our specific settings. Remember, be sure the image is showing at 100 percent (use the Zoom Tool to zoom in or out) before making any adjustments.

## LOOKING BACK TO GO FORWARD

Take a moment to reflect on the work you've done up to this point. Have you been using your trigger lists or DIY manuals? What seems easy, what seems unclear? Review any questions that have been accumulating during this course and seek out the resources that can help you find the answers.