Digital Workflow Tutorial - Part 2

(4) Removing Blemishes

This is a quick section with a tip to telling you how I remove blemishes from my images (my own technique).
If you have a better method, then skip to the next section.

My technique is to create a levels layer above the background layer, increase the contrast dramatically on this layer so the blotches stand out. Now re-select the background layer and use the clone brush or healing brush to remove marks as normal. When you are done just delete the new levels layer you have created.
Here are the steps in detail:

Step 1: Create a new levels layer, by clicking on the new layer icon, then choosing levels (See Figure 1 below).
Step 2: In the Layers dialog that appears, move the left hand slider to the right (the red line in Figure 2) to darken the image and make the blemishes more distinguishable.

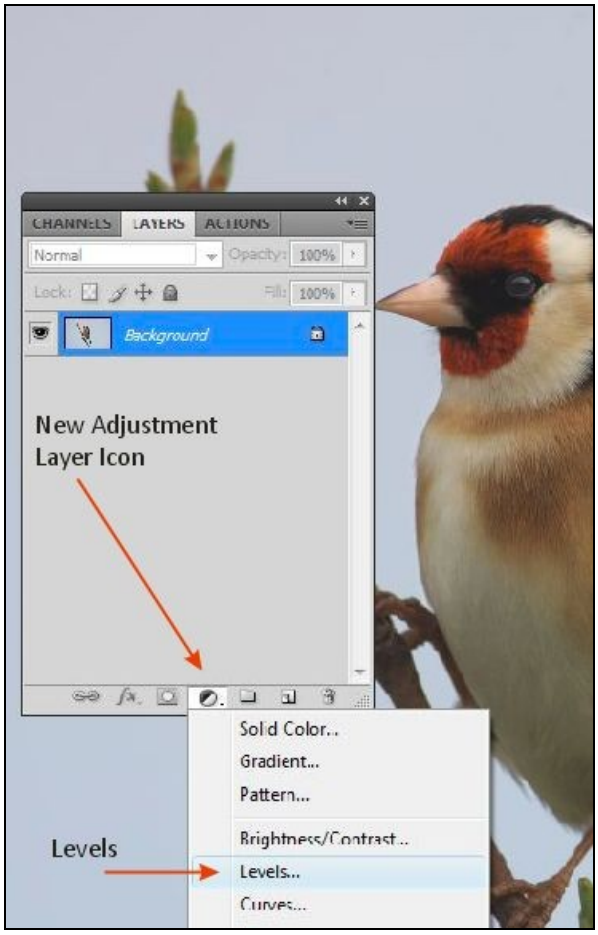

Figure 1: Create a new levels layer

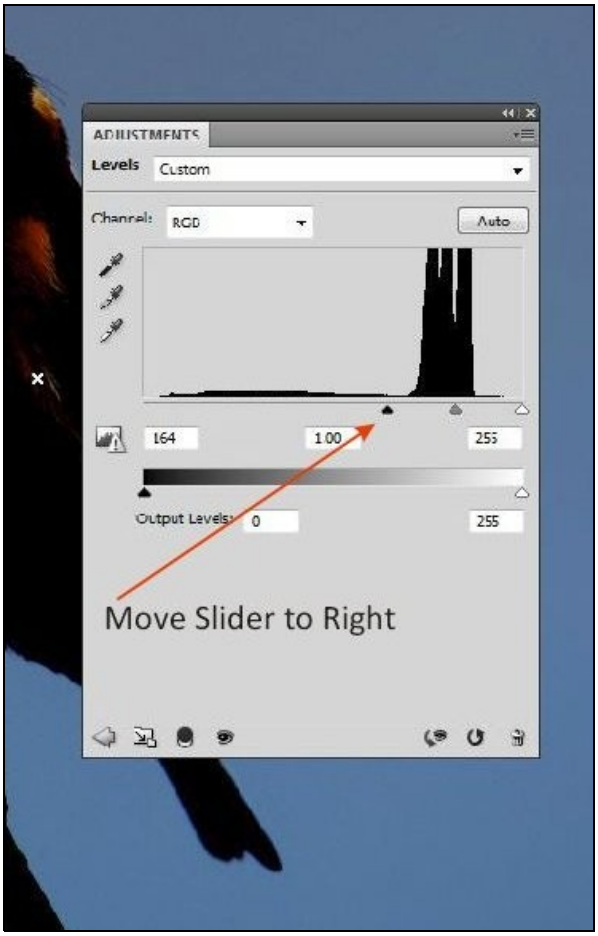

Figure 2: Darken the image

Note: that we can now see other blemishes that were not obvious before, see figure 3.
Note: You MUST select the background layer, to clone away the blemishes!!.

Step 3: Select the background layer and start to remove blemishes with the Healing Brush (or Clone Brush, see panel insert)

Step 4: When all blemishes have been removed, select and delete the new levels layer that we just created. You can do this by dragging the layer onto the bin icon, or by right clicking on it and selecting delete layer.

I would stress that you should always look for blemishes as they may not be immediately visible. Note also that blemishes are more visible in smooth bright areas of an image, like the sky. If there are blemishes on an image of a pebble beach, they may not be visible and can probably stay there! (Choose your battles carefully). That's it for removing blemishes. If you look at the layers palette, we should just have a background layer.

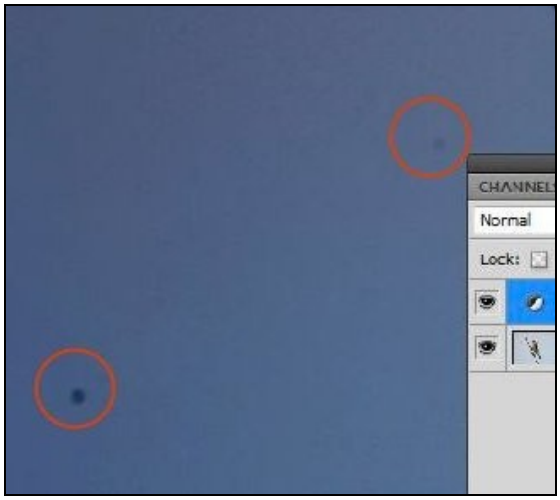

Figure 3: The blemishes are now visible

Tips on Cloning and Healing Brush

If it doesn't work, undo it and redo it, don't keep trying to fix something that is broken, it will just get worse.

If you are using the healing brush near a dark edge, the brush may copy this edge just when you don't want it. In this case either create a freehand selection eliminating the dark selection or change over and use the clone brush.

If you cannot get a transition to look natural, try using the clone brush with the opacity set to 15% or 25%

Save this image now because it you want to reprocess it again, e.g. for black and white, you don't want to have to remove the blemishes again.

(5) Auto Levels

The objective of setting levels in Photoshop is to increase our tonal range which has the effect of increasing the contrast of our image. Let's look at an example to see what levels are all about. I have chosen this image (figure 4) because it has a narrow colour profile.

Figure 4: Original image before changes

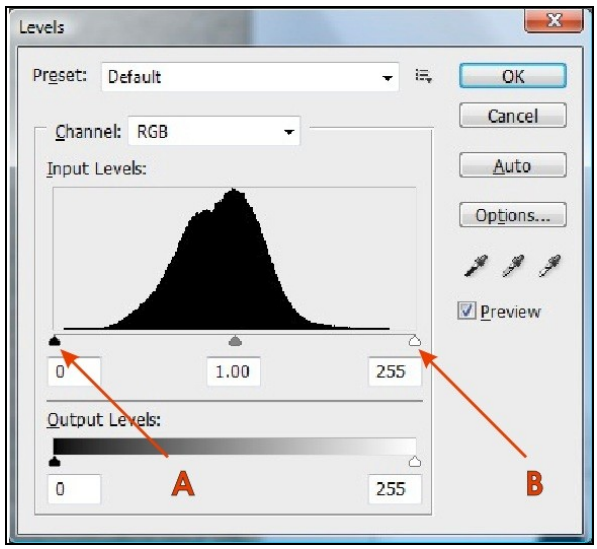

Figure 5: Histogram. Note the gaps on either side

Starting with image 4, if I add a Levels Adjustment Layer by using clicking on the New Layer Icon, I will be presented with a dialog box with a histogram, as in Figure 5. See Histograms tutorial for more details about histograms.

Looking at Figure 5, the sliders under the histogram show the starting point for Shadows (on the left, marked "A" in Figure 3) and the Highlights (on the right, marked "B"). By adjusting the sliders, we can reposition these points. For example, I could make dark grey to appear as black, by moving the left slider a bit to the right, i.e. I am darkening the image. Similarly, if I move the right hand slider "B" to the left, I will make the image appear brighter. When I adjust these "black" and "white" points, all the values in between are subsequently re-mapped (they are compressed to fill the new range). This has the effect of increasing the contrast of our image.

Ideally, we do not want any unused space on either side of the histogram. Looking at the histogram (in Figure 5 above), we can see that there are gaps between the left hand edge and the start of the histogram ("A"). There is a similar gap at "B" on the right. This means there are parts of the colour range (number range actually) that we are not using.

If I click on "Auto", Photoshop will remove these gaps (See results Figure 6). However, the photograph looks terrible. Not only has the contrast changed, but there has been a significant shift in the colour balance of the image. This is undesirable and rarely the change we are looking for. Here's why and how to fix it:

Figure 6: Image with Auto Levels

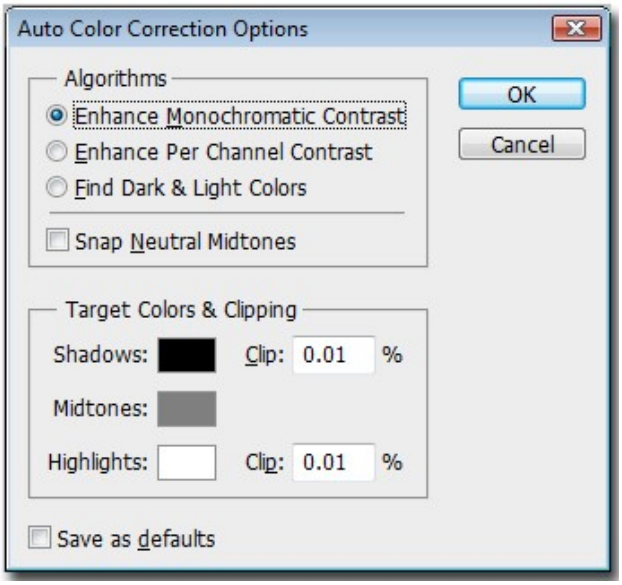

Figure 7: Auto Levels Options,
Choose Enhance Monochromatic Contrast

If we select the Options button in the Levels dialogue box and choose "Enhance Monochromatic Contrast", we will increase our contrast without changing the colour balance. Any changes that are applied will be made to all three colours simultaneously, so that the colour balance doesn't change.

Also in this dialog box is the "Clip" value. Clip says how much we move the sliders in. Photoshop actually makes a very severe clip and hence the dramatic changes to the image when you hit auto. If we leave this clip at 0.01 for both shadow (left) and highlight (right), we will lose virtually no detail and we will gain contrast in our image. If you click the "Save as defaults" (See Figure 4) checkbox, we will not have to do this again. Press OK and that's it for Levels.

Additional Notes:

- Sometimes, when there is a colour cast on an image, the “Enhance Per Channel Contrast” option can improve the image.
- There are times when we do want to increase the "Clip" amount, particularity for black and white images. This may be to compress the shadow detail, the highlights or just to add greater contrast to the image.
- As we manipulate our image more and more, gaps will appear in the histogram. If these gaps become too large, we can get large jumps between adjacent colours and this can look unnatural we print the image. We need to minimise this.

Before we move on, let's look at the histogram and note the following:

- It uses the full colour range, i.e. there are no gaps on the left or right
- There are minor gaps in the histogram, but they shouldn't cause any problems

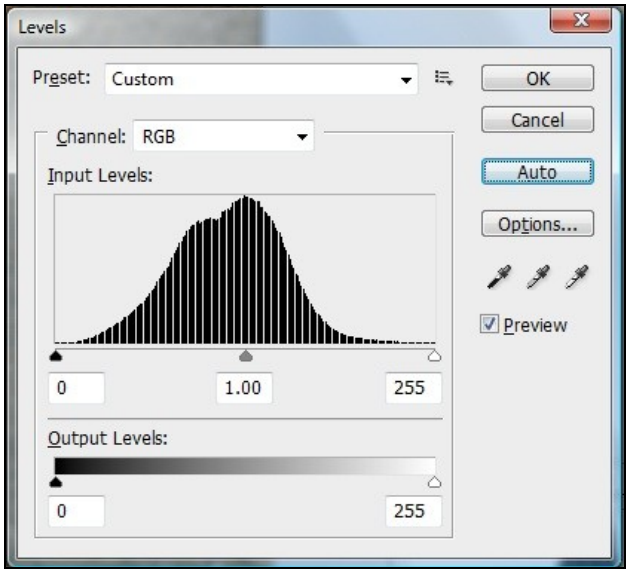

Figure 8: Our Histogram After Levels have been applied

Now finally, let's compare the two images

Figure 9:The Original Image

Figure 10:The Image when Auto Levels has Been Applied

I'm sure you will agree that this is a big improvement.

(6) Contrast, Curves and the Luminosity Blending Mode

Contrast in photography refers to the difference between brightness levels or colour levels. Adding contrast to an image is usually a good thing, finding the right level of contrast to add is important.

In the beginner's course, we looked at adding some contrast by adding a layer of type "Brightness and Contrast". This is really a very limited approach because it is very difficult to control the degree to which highlight and shadows are affected.

We are going to add a "Curves" layer to adjust our contrast. However, for now we are not trying to adjust the colour of the image, so we are going to use what's called the "Luminosity" blend mode. This means that any changes we make will only affect the lightness values of the image and not the colour.

A Note about Curves

Curves can be used to adjust the tonal range of an image, either one colour (channel) at a time or all colours together.

Curves can also be used to make specific changes at particular regions of the tonal range, i.e. in the shadows or the highlights.

(a) The S Curve Method of Increasing Contrast

This is probably the most popular and easiest method. Here's a brief description of the s-curve method

Create a new curves layer. Click in the centre of the line (at point B) of the graph (or Curve) that appears. This will anchor the curve in the middle. Note also that the Input and Output boxes will both say 128, this is the half way point.

Now select a point ¾ of the way up the curve (point C). To start with, enter the value 192 in the Input box and 208 in the Output box. This will make our highlights brighter. Now select a point ¼ of the way up (point A) for the shadows, set the Input box to 64 and the Output box to 56, as in Figure 11. This will make our shadows darker.

Finally, change the blend mode of our new Curves layer to Luminosity, so that only the tonality of the image (and not the colour) is changed.
For every image, you will need to tweak the points A and C, to fine tune the highlights and shadow contrast.

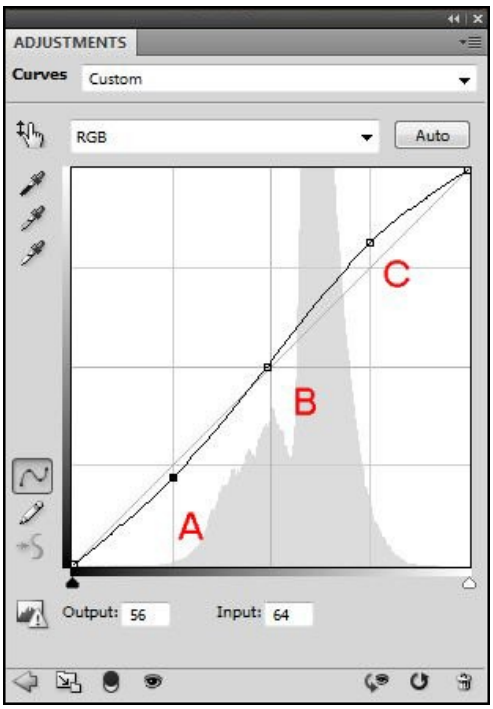

Figure 11:The Curves adjustment with our three anchor points

In general, you will probably want to increase the highlights more than you want to reduce the shadows, so if you add 10 to the highlights input value, you probably want to subtract 5 from the shadows input value. Before we move on, let's just have a look at an example of an image with the contrast increased with the s-curve method.

Figure 12:Image without s-curve contrast

Figure 13: Image with s-curve contrast added

(b) The Channel Mask Approach

The problem with the s-curve approach is that it is very difficult to change the highlights without affecting the shadows. The method we will look at now solves this problem and will also introduce the technique of channel masks.

If you are unsure about masks, have a look at the Masks Tutorial. There are many ways to create masks in Photoshop, for this exercise we are going to create a mask using our colour channels. If you open the channels window, you will see an icon with the RGB channel (all three colour channels together) and icons for each individual colour channel. Photoshop allows you to create a mask from any of these channels by holding down the control key and clicking on the respective channel.

We will use the RGB channel to create our mask. This will produce a mask based on the Luminosity (brightness) of our image. This also means that when we use this mask, we do not have to change the blend mode to "Luminosity"

as in the s-curve method above. We will use this mask to control how our highlights are effected over our image (we want them to effect the bright areas and not the dark areas). We will do the opposite for the shadows.

With that in mind, here are the steps

(i) Go to the Channels window and while holding down the "Ctrl" key (or Apple Key on a MAC) click on the RGB icon. A cursor of a hand, Figure 14, will appear when you hold the control key. This will produce a selection from the image based on the luminosity of the image that appears as dotted lines on the image.

(ii) Now click on the "Create New Fill or Adjustment Layer" icon and select Curves from the menu. This adds a Curves Adjustment Layer and automatically uses our Luminosity Mask from step one, See Figure 16

(iii) Click on the centre of the curve and a point will appear, the value will be something like Input: 128, Output: 128 (It may be slightly off if you didn't click exactly in the centre).

(iv) In the "Input" box type 128 and in the Output box type 144. This will make the image brighter (by about 6%).

(v) Name the layer "Highlights" by double clicking on the layer name.

Figure 14: This cursor will appear when you hold down the Control Key and move the mouse over the RGB channel

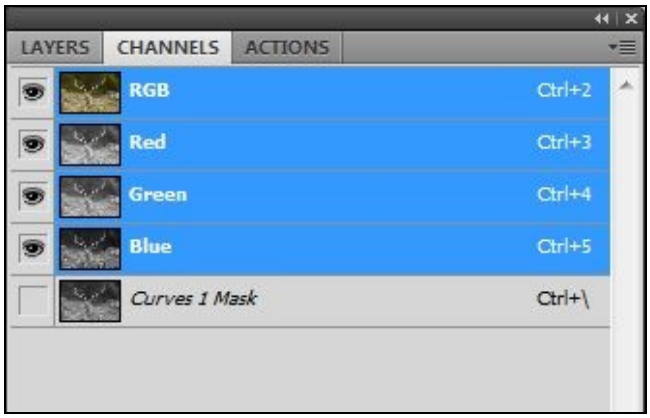

Figure 15: Click on the top RGB Layer while holding the control key

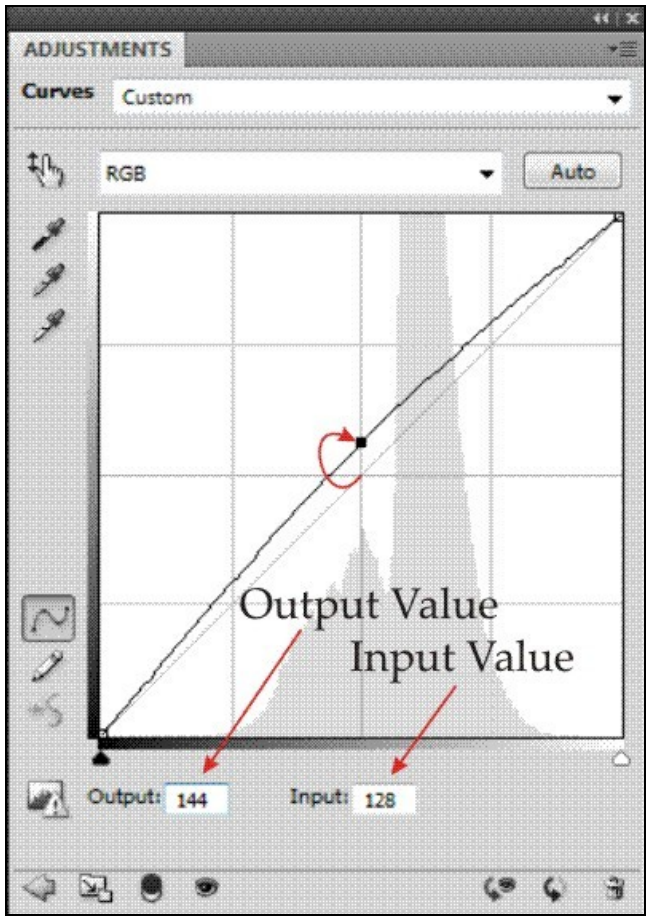

Figure 16: Setting the curves adjustment layer

Before we move onto the final section in this tutorial, I just want to display our Layers window and have a quick look at the mask we just created, just so you know what it looks like. If you press the “alt” key and click on the mask thumbnail, you can see the mask which is a black and white (or luminous) version of our image. Note that you can paint on this mask, just as if it was an image. This allows us to touch up masks at times in particular to eliminate sensitive edges when sharpening an image, but more on this later.

The important thing to see and learn here is that our mask is bright in the highlights and dark in the shadows. This means that our change to “Curves” (which was to brighten the image) will be targeted at the highlights and hardly affects the shadows.

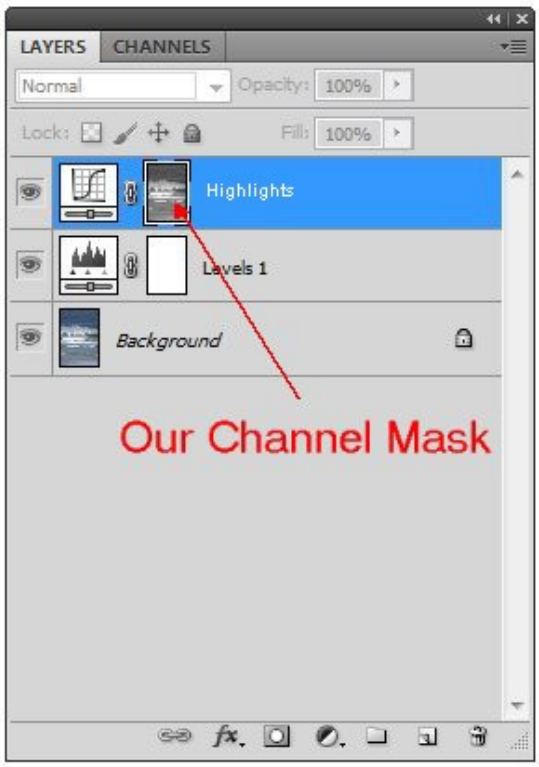

Figure 17: The Channel Mask on our Curves Layer

Figure 18: The Channel Mask is a Black and White Version of Our Image

Now that we have created a Highlights Layer to increase the brightness of our highlights and used a layer mask so that they are applied to our highlights and not shadows; we need to just the opposite for our Shadows. We will create a curves layer, darken it and apply it only to the shadows.

If you think about it, our mask will be the opposite to the Highlights mask. So To speed things up, we can copy our previous layer, invert the mask, then finally change the curve to darken our shadows.

Here are the steps :
(i) Copy the “Highlight” layer by pressing Ctrl J
(ii) Double click on the layer name and change it to Shadows
(iii) Click on the Shadows mask icon, then press “Ctrl I”, this will invert the mask
(iv) Click on the Curve Adjustment and change the Input = 128 and Output = 120

We are now done with increasing our contrast. Before finishing up, we will look at an example of an image before and after our contrast changes.

Figure 19: Image without Contrast Added Using Curves

Figure 20: Image with Contrast Added Using Curves

It may be difficult to see the differences at first, especially with small images, but the additional contrast improves the image and is still very natural looking. All that remains to finish our work flow is to increase the saturation our image and apply some sharpening and that will be the subject of our final workflow tutorial.

One final word, **IS THIS ALL TOO MUCH?**

All these steps can be recorded. So when it comes to processing an image, you don't have to go through all those steps (in fact all the steps from all three tutorials/workshops). All we do is make one mouse click and 10 seconds later it's all done. To see how to do this, look at the Actions tutorial.