

Photo imaging

Restoring a Faded Photograph

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Today I would like to introduce you to the Adjustment Layer. What is an Adjustment layer? Basically it can be considered analogous to a colour- correcting filter placed over the lens of a camera but is much more versatile, as it allows you to experiment with colour and tonal adjustments without actually modifying the image or the layers beneath the Adjustment layer. So, if for instance you apply a correction with Curves or Hue/Saturation and you are not happy with the result, just 'trash' the Adjustment layer and start afresh.

Curves are the most precise tonal correcting command as it enables you to adjust any point along a 0-255 tonal scale and thus is the best tool to restore a faded photograph. Let's try it.

1. Scan an old photograph that you would like to restore.
2. At the bottom of the Layers palette click on the 'create new fill or adjustment layer' icon (third from right).
3. From the flyout menu choose Curves and click OK.
4. Drag the Curves dialog box down to reveal most of the image
5. Click the white eyedropper at the lower right in the dialog box and then click the brightest (whitest) point in your image to create a new white point. You'll notice an immediate tonal change.
6. Now click on the black eyedropper at the lower left in the dialog box and then click the darkest (blackest) point in your image. This creates a new black point. And now you should have an approximate restoration of the former colours. In case your image (as mine had) still shows a cast of some colour (green, magenta, blue, etc.), select the corresponding Channel from the drop-down menu at the top of the Curves dialog box (in my case it was the green Channel to reduce the magenta cast) and place the cursor at the midpoint of the diagonal line, click and drag it slightly up or downwards depending on the cast. This will allow you the most subtle tonal adjustments in the middle values of your image.
7. To verify just how much the tonal values of your image have changed, click the eye icon to the left of the Curves layer on the Layers Palette and your original image appears. Click the eye icon again and if you are happy with the result, click the small arrow at the top right of the Layers Palette and select 'flatten image' and save it.

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Layer Mask

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As promised in my last article, today we shall look into the advantages of using Layer Masks. Basically, Layer masks allow you to hide and/or reveal parts of a layer, as well as - like Quick mask - to apply changes to part of your image in a controlled and precise manner without affecting the original image. Yet, I mostly use Layer masks to either 'hand-colour' a picture or to create photomontages.

An easy way to 'integrate' a given object/subject into another image is done as follows:

1. Open the two (or more) images you want to 'assemble'. The two very important things here are that all images are in the same Colour Mode (RGB or CMYK) and particularly that they all have the **same resolution** (amount of dpi). Roughly select with the Lasso tool the object/subject you want to 'integrate' and drag it into the other image holding down the Ctrl+Alt keys. Then press V (Move tool) to place the object/subject in the desired position. In case its size needs to be reduced, press Ctrl+Shift+T to activate the Free Transform Tool. Then, holding down the Shift key, drag at any of the four corners to adjust the size of the object. Holding down the shift key while dragging, the exact proportions of the object are maintained. As each object transferred into another image creates its own layer, there are now at least two Layers in the Layers palette: the original Background layer and Layer 1. To keep it simple, we'll stick to just two Layers today. In my first example, I thought that this man sleeping on the steps of the main post office in Perth would look quite nice in front of this 'Art Factory' photographed in Bratislava, Slovakia, last June.
2. Now it is time to 'finetune' the selection. On the Layers palette activate Layer 1. Then click on the 'add layer mask' button (second from the left) at the bottom of the Layers palette. The Layer mask thumbnail will appear next to the image thumbnail. Click on this thumbnail to activate it. Now press D to make sure the colours are set to default – black foreground and white background colour. You remember, black erases and white restores. Press B to activate the Brushes palette and choose a medium size soft brush. Paint along the outside of your transferred object. In case of overlapping press X and restore. As with the Quick mask mode, this process is made easier when zooming in to 300% viewing resolution on the part you are working at by pressing Ctrl+Spacebar or the Spacebar alone to scroll. Once you have completed the 'finetuning' and you are satisfied with the results, drag the Layer mask thumbnail into the 'rubbish bin' at the bottom right of the Layers palette. A window will appear asking you to either 'apply, cancel or discard' the mask. If the results are convincing, click on 'apply', if not on 'discard' and your original image appears - untouched.

The process used in the second of my examples is somewhat more artistic and a bit more complex. A 'perfect' blend can be obtained by using the Layer mask and the Gradient tool. Proceed exactly as described in Point 1 and create the Layer mask on Layer 1. Click on the thumbnail to activate it. Now go the Tool bar and click on the Gradient tool. Make sure that the foreground and background colours are set to Default and the Gradient is set to 'Foreground to Background'. Now drag over the image from top to bottom and you will see that the transferred selection will blend into the image by fading at the bottom. If you drag in the other direction, the fading is inversed. Basically you can drag over the image from any side – try it and see what suits your liking. To increase the overall transparency, reduce the opacity (at the upper left corner of the Layers palette) of Layer 1 to the degree you feel adequate. Should you still not be quite happy with the result, create a second Layer mask on Layer 1 and proceed as described in Point 2, erasing overlapping areas. If need be, reduce the opacity of your brush stroke (at the top menu bar when the brush tool is activated) to really achieve the results you wish.

This process will need some experimenting and exercising – but I think the results are really gratifyingly stunning. So why not have a go. Good luck till next time.

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'Hand-colouring' an Image

Margrit C. Wendt

Today we shall have some fun with so-called hand-colouring an image in Photoshop. How do you think this can be done? Very simple. Just follow me.

1. Scan or open any coloured image in Photoshop.
2. On the Layers Palette, duplicate the 'Background' layer by dragging it onto the corresponding icon at the bottom of the palette.
3. With the 'Background copy layer' still active, you can either transform this layer into b&w or by simply desaturating it – go to Image/Adjust and choose 'Desaturate' or choose 'Hue/Saturation and slowly move the saturation slider to the left until no colour is visible in the image.
4. Now add a layers mask to the background copy layer by clicking on the second icon from left at the bottom of the Layers Palette. Make sure the foreground and background colours are set at default (black foreground colour, white background colour). Remember, black erases and white restores.
5. In the 'tool box' select a medium sized brush and start painting over the area you would like to 'hand-colour'. As you will notice, we are not really colouring in anything, but by erasing areas of the background copy layer, the colour of the underlying layer (background layer) becomes apparent again. Zoom in (short-cut: Ctrl + spacebar) on the area in question to be able to work in a more precise manner. To vary the effects, you can reduce the pressure of the brush, i.e. reduce its opacity (to be found under brush options). Should you make a mistake or wish to change the 'coloured composition' don't worry, just press the letter 'X' on the key- board and brush over the area you want to restore to black & white. To 'zoom out' press ctrl + alt+ spacebar.
6. Once you are happy with your creation, discard the layer mask by dragging it into the rubbish bin at the right bottom corner of the layers palette. An attention box will pop up asking if you want to apply, to discard or to cancel your command. Click on 'apply'. To finish of, click on the arrow at the right hand top corner of the Layers palette and choose 'Flatten image'.

Isn't that fun and doesn't your finished image look absolutely stunning? The enclosed examples give you an idea of what can be achieved.

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Gaussian Blur Filter

By Margrit Wendt

The Photoshop Gaussian Blur filter is a very helpful and effective tool. Not only can it be used to blur a disturbing background but, when applied to an image, creates a diffuse, painterly look which – depending on the subject – can be very pleasing. The examples included show the before and after effect of this process. To achieve this is basically very simple.

1. Open an image – colour or black & white – in Photoshop. Duplicate the background layer by dragging it on to the symbol “create new layer” at the bottom right of the layers palette.
2. With the ‘background copy’ still active, go to ‘Filter’, Blur, Gaussian Blur. There are two ways of applying the filter with rather different effects. The simpler way is to apply it directly to the ‘background copy’ layer. Apply the Gaussian Blur in an amount of 30 to 40 depending on your liking. The higher the amount, the more artistic the end-result will be. Another way is to apply the filter to each individual channel ‘Red’, ‘Green’ and ‘Blue’ of your image in an amount of 10 to 15 resulting in a beautifully soft appearance.
3. As third and last step, the ‘background copy’ layer being still active, click on the arrow of the blending mode at the left top of the layers palette which by default states ‘normal’ and select either ‘Overlay’, ‘Hard-Light’, ‘Soft-Light’, ‘Darken’, ‘Lighten’ or even ‘Multiply’ again depending on which effect appeals to you most. However, using the ‘Multiply’ mode results in a very dark picture like when sandwiching two correctly exposed slides or negatives. But with Photoshop this is not a problem. Go to ‘Image’, ‘Adjust’, ‘Levels’ and increase the brightness of both the background layer as well as the background copy layer. Last but not least, decrease the opacity of the background copy layer to about 70% so as to blend in more of the sharp underlying layer (background layer).

I’m sure the somewhat mystique, ethereal effect of the image you just created will be an award winning one. Good luck.

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How to correct an underexposed photograph

By Margrit Wendt

1. Scan the picture into Photoshop and open the layers palette. Duplicate the background layer by dragging it on to the symbol "create new layer". You'll see a second layer called "background copy" but nothing has changed yet.
2. While the 'background copy' is still activated change the 'blending mode' at the left top corner to 'screen' and you'll notice that the whole picture becomes much lighter. If the result is not yet convincing, you can repeat step one and two until you are satisfied. Should you opt for more layers, to continue this exercise you'll have to merge them down until only two layers remain (background and one background copy). To 'merge down' layers click on the icon next to the 'eye' of each layer you wish to merge, then click on the 'arrow' at the right hand corner of the layers palette and click on the command 'merge linked'.
3. Now the image seems all right, but the background is pretty much 'blown out'. But this situation is easily rectified as follows: activate the 'background copy' layer. Go to the bottom of the layers palette and click on the 'add mask' symbol. In the 'tool box' click on 'brushes' and select a medium sized soft brush. Make sure that the background and foreground colours are set at default (black foreground colour, white background colour).
4. Start painting over the background to reveal the darker colours of the background layer until the 'lightened subject' is completely isolated. To make things easier, try to zoom in on the area you are working on by holding 'ctrl + spacebar'. By holding down only the spacebar, you can move the picture around to better view the area you want to work on. In case you make a mistake, don't worry – just press the letter 'X' and brush over the area. To put it simply, the black colour erases and the white colour restores in the 'mask mode'.
5. Once you are satisfied with the result, merge the layers and save your work.

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Atmospheric Perspective

by Margrit Wendt

Don't you sometimes wish you could give a certain image more depth or atmospheric perspective? There is a way to achieve this illusion in Photoshop with the help of graduated filters. I shall explain how these effects can be done first with a b/w and then with a colour image.

1. Open a b/w image.
2. Convert your image to RGB Mode by selecting *Image*→*Mode*→*RGB*. Click OK.
3. Click on the 'Create a new Layer' icon at the bottom of the *Layers Palette*. Choose **Multiply** from the drop down menu of the Blending Mode (right hand top corner of the *Layers Palette*). Click OK.
4. Press D for Default Colours.
5. Click on the Foreground colour and choose the colour you wish to apply as a filter. I chose a warm yellow. Click OK.
6. From the Tool Bar select the *Gradient tool* (or just press G) and choose *Linear Gradient* in the Menu bar (the first of the 5 different gradients). Then click into the rectangle to the right of the various gradients and choose from the drop-down menu (Gradient Editor) 'Foreground to Background', which is the first of the small icons.
7. Make sure the new layer is activated and drag inwards on the area where you wish to apply the filter. Experiment with several different directions, lengths and if you want colours. In my case, I placed the gradient tool well outside the top of the image itself (to make it more transparent) and dragged it about 1/3 into the picture. Should you consider the graduation too dense, reduce the *Opacity* of the new layer (top left corner of the *Layers Palette*). And in case the filter covers an undesired part of the image, just create a *Layer Mask* as formerly described in *IMAGE Magazine* and erase with a medium size soft brush. That's what I did on the right hand side building.
8. To give my image an even greater depth, I created a second New Layer, selected again 'Multiply' in the Blending Mode, chose a different foreground colour – this time a deep blue - and dragged the gradient from the bottom again 1/3 into the picture. As a matter of fact you can create as many different 'Multiply' layers and choose each time a different colour to achieve the atmospheric perspective you like.

For colour images, the process is exactly the same. Yet in the attached colour image I wanted to de-emphasize the leaves in the background. So I chose as foreground colour a neutral or 50% grey. To get this grey click in the foreground colour icon and enter in the opening *Colour Picker* menu for H (Hue) 0; S (Saturation) 0 and B (Black) 50%. Then I dragged the gradient from the top over the leaves. By the way, holding down the *Shift key* will give you an absolute straight line. Then I created a second layer and selected an orange colour and dragged the tool from the bottom into the image to create just a little bit more 'drama' or impact. Do you agree?

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Burning in Edges

By Margrit Wendt

You certainly recall the times when we burnt in the edges of a photograph in the darkroom so as to constrict the eye towards the center of the image. The same can be achieved quite creatively in Photoshop. Following I'll describe different ways of doing this with the help of selections.

1. Open an image
2. Select the *Rectangular* or the *Elliptical Marquee* tool from the tool box, make sure the *Feathering* at the top left of the Menu Bar shows 0 px and drag a selection within a few millimeters from the border of the image.
3. Press *Ctrl + Shift + I* or choose *Select→Inverse* from the *Menu Bar* to invert the selection.
4. At the bottom of the *Layers Palette* click on the *Create new Fill or Adjustment Layer* (3rd from right) and choose *Hue/Saturation* from the dialog box. In the opening dialog box first drag the *Saturation* slider to the left to reduce the chroma and then the *Lightness* slider also to the left to darken it. The further left you drag the *Lightness* slider, the darker the 'border' will get. In my 1st example I reduced the *Saturation* to minus 35 and the *Lightness* to minus 50. Click OK.
5. Now go to *Filter→Blur→Gaussian Blur* and drag the *Radius* slider to the right to somewhere between 150 and 250 pixels to soften the transition edge and click OK. If you consider the edge still too obvious, reduce the opacity of the *Adjustment Layer* at the right top of the *Layers Palette* to make it look right.

A more creative way is burning in the edges with the help of the *Lasso Tool*.

1. Open an image
2. Select the *Lasso Tool* from the *Tool bar* and make an irregular selection within the image as described above.
3. Now we want to feather this selection to create a smooth transition. To do this, go to *Menu →Select→Modify→Smooth* and enter a *Sample Radius* value of 20 or 30 pixels. Click OK.
4. Now repeat the steps 3 to 5 as described above.

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Tips & Tricks

Margrit Wendt

Who hasn't been frustrated or annoyed to see that the horizon in one of your preferred photos is tilted or the sea 'runs out'. With Photoshop®, however, this is extremely easy to correct and I'll show you how. There are actually two ways to straighten out the horizon.

Step 1

Scan the image into Photoshop® and make the rulers visible by pressing *Ctrl + R* (shortcut) or *View > Show Rulers*. Click on the horizontal ruler at the top of the image and drag down a guideline till you reach the higher edge of the tilted horizon. The other possibility is to select the '*Measure Tool*' to be found in Photoshop® 6 under the *Colour Picker Tool* and to drag a line along the tilted horizon.

Step 2

Now go to *Image > Adjust > Rotate Canvas > Arbitrary*. Depending on your image, activate either *CW* (clockwise) or *CCW* (counter clockwise). The number under '*Angle*' indicates the degrees necessary to straighten out the horizon. In my example the Angle indicated 4.11 degrees. Click OK and your picture will be rotated by the degrees indicated. Don't let the appearing white (or black, depending on the background colour) corners frighten you. We will get rid of them in the next step. Press *Ctrl + R* again to hide the rulers or otherwise simply drag the *Measure Tool* line out of the picture.

Step 3

To eliminate some of the white border, activate the *Crop Tool* located just below the *Lasso tool* in the tool bar and drag a rectangle over the desired area. When releasing the mouse button, there will be square handles on the bounding box that surrounds the selected area. If adjustments are needed, click and drag these handles until the bounding box is at the desired size and position. Now either double click in the bounding box or simply press the *Enter key* to apply the cropping. As you can see in the example, there still remains some white background at the right top corner which we'll remove in the next and last step.

Step 4

Click on the *Clone Stamp Tool* in the tool bar or just *S* (shortcut). On the options bar, choose a medium sized soft round brush (ex. 27-pixels). Hold down the *Alt key* and place the cursor in the sky close to the start of the white area as the initial sampling point and click. Release the *Alt key* and start painting over the white area. To make drawing easier and also to ensure that the painting over remains unnoticeable, zoom into the specific area by holding down *Ctrl + Alt + Spacebar* and clicking onto the area to be enlarged. If necessary repeat the sampling process until the area is completely covered. I'm sure, nobody will notice that we somewhat 'repaired' the sky.

By the way, this 'straightening' procedure can also be applied vertically to buildings, etc. that 'suffered' distortion due to the use of a wide angle lens. Yet, in this case the procedure is a little more 'labour' intensive or complex. If you are interested in this correction process, let me know and I'll try to explain in one of the next issues of IMAGE.