

Retouching

Non-Destructive Photoshop Editing Techniques

This means always giving you a way not to irrevocably lose your original data, even if the file has been saved, closed and reopened.

Anything you do directly to the background layer is potentially destructive if you save the image before undoing it.

Erasers, including background and magic, destroy

pixels. Use *layer masks*  instead.

The background layer is a flattened version of the opened file. Think of it as a backup layer. If you first duplicate the background layer, that keeps the original image intact.

Use *adjustment layers*  for doing edits like curves or color correction gives you certain options you wouldn't have if you did color correction without an adjustment layer. What are they?

- The original image is untouched!
- The file size is hardly any larger. Try that with a duplicate layer!
- You can use the same filter more than once on the same layer!
- You can change your mind later and adjust the adjustments.
- It is a permanent editable part of the PSD file
- You now have an option of fading in the edit.

Patch on “tattoo”

Quick fix.

- LR
- 1) make the brush the right size.
 - 2) drag over tattoo
 - 3) grab copy-from icon and move to best place

LR History palette is on the left when in Develop
Unlike PS, list will be saved when quitting
so you can change your mind tomorrow, too!

Healing Brush on “smileneeded.jpg”

Rings under eyes can be fixed.
(Also try this with Lightroom Spot Healing tools.)

The *healing brush* is like the clone tool, but the Healing Brush tool also matches the texture, lighting, transparency, and shading of the sampled pixels to the pixels being healed.

Note first fix spot on forehead, and use lighter area in forehead to supply pixels under the right eye. Use darker area in forehead or cheek to supply pixels for the left eye.

1. Make a new duplicate layer. Drag the layer to the new layer icon at the bottom.
2. Select the Healing Brush tool and set brush options in the pop-up palette:

Choose a blending mode from the Mode menu in the options bar. Use *Normal* for this pic.
Choose *Replace* to preserve noise, film grain, and texture at the edges of the brush stroke.

Choose a source to use for repairing pixels in the options bar: *Sampled* to use pixels from the current image.

Select *Aligned* in the options bar to sample pixels continuously, without losing the current sampling point, even if you release the mouse button.

(Deselect *Aligned* to continue to use the sampled pixels from the initial sampling point each time you stop and resume painting.)

Select *Sample All Layers* in the options bar to sample data from all visible layers. Deselect Use All Layers to sample only from the active layer.

3. For the Healing Brush tool in sampling mode, set the sampling point by positioning the pointer in any open image and Alt-clicking (Windows) or Option-clicking (Mac OS).
4. Drag in the image. The sampled pixels are melded with the existing pixels each time you release the mouse button. Look in the status bar to view the status of the melding process.
5. Use the healing brush to brighten the left eye. (I'm serious!) It is too dark and almost doesn't match the right one. A soft 15 px brush does pretty well.

So, the Healing Brush is Useful:

Used to remove muscle lines, wrinkles in underarms and under eyes, ribs showing too much on bare midriffs, etc.

Try the *Patch tool* , found with the Healing Brush. Undo with the History Palette try Patch.

- 1) Zoom in because we will be tracing an outline.
- 2) Trace around the area to fix.
- 3) Now drag from the area to the forehead & release.
- 4) Notice how it fixes itself? Now try dragging from the area down to the cheek. Even though it seems to have the opposite shading, when you release, it fixes that pretty well.

Difference between Healing Brush and Patch tool?

Healing Brush is like a smart Clone tool.
The Patch tool has you select a patch and drag it to the area to be fixed.

Smile Enhancement: the 2017 CC version of PhotoShop has a new section in *Filters > Liquify* that makes it easy to modify facial features in typical ways. Tools include eye size, smile, and facial shape.

Blend Mode Groups



Hair Coloring (LanganPhoto)

- 1) Open up Photoshop, and insert a jpeg image of the person who'd like to change their hair color
- 2) Insert a new layer: [cntrl] + [shift] + [n]
- 3) Cover her hair with a color that's easy to pick out from the current
- 4) Now make it less opaque, till it looks kind of natural, change the color to suit the needs,

Try red over blond for dramatic effect
Lightening dark hair? Try *normal* or *overlay*
Dark hair? yellow and *multiply* makes it auburn

Glamorous Glow (see GlamorGlowPNGs) Using Blur and Overlay

Look at 350glamorExample images first

- 1) Open up an image in PhotoShop. (*Woodward*)
- 2) Layer>>Duplicate Layer.

- 3) Make sure you are on the top layer, and then click Filter>>Blur>>Gaussian Blur...
A window should pop up, and change the Radius to 15.0, then click Ok.
- 4) Change the blending mode from Normal to **Overlay**, and then left click it. And now you're done!

Why? Overlay takes the color from the over layer, and the texture from the under layer.

Luminosity takes the brightness from the over layer, and the color from the under layer

Glamorous Glow 2 (modified from creativebits.com)

Use **glamour1.psd** or **donaldson.jpg**
Another useful characteristic of channels!

- 1) Open image. Open the channels palette.
- 2) **Select** the red channel alone because it typically has the cleanest skin tones.
Select all to get everything in the channel image.
Copy to the clipboard.
- 3) Select RGB in the channels palette,
- 4) Go to the layers palette and add a new layer above the background layer. Paste into the layer. Choose **Luminosity** as the blending mode. Getting close!
- 5) Create a new adjustment layer above the other two layers. Use curve. Pull the curve down to tame the image.
- 6) Select the layer mask thumbnail in the curves adjustment layer. Paint black with the paintbrush to remove the curves effect from the eyes.
- 7) Use the eraser at 15% on the middle layer to bring back lips and hair. (Let them show through from the under layer.)
- 8) Adjust the opacity of the second layer to suit.

Selective Glow Option

- 1) duplicate layer 2) blur 3) mask 4) brush white where you want the glow to show through.

Lens Blur Filter

Like selective focus/limited DOF.

- 1) Open an image (*Woodward* or *eyes.jpg*)
(or use *glamour1.psd* from above!)
- 2) Make a *duplicate* layer of the background.
(Yes even the pimply over-flashed)
Add a *Layer Mask* (or alpha channel)
Circle in square at bottom of Layers
- 3) Choose image icon next to mask and choose
Filters > Blur > Lens Blur
- 4a) Use a soft brush to paint in the mask.
- 4b) Choose the Gradient Tool, black to white
and *radial* or linear, and drag across the *mask*.
- 5) Source is Layer Mask
- 6) Adjustments
Drag radius back to increase the focus area.

Drag blur focal distance back to get face in focus.

The Iris settings change the shape of the blurring circle, as an iris has multiple plates that slide, this can mimic them. The more the closer to a circle.

A linear gradient will create a path of focus across the image.

Now try painting with a wide soft brush in the layer mask, black is in focus, white is out of focus.

Spot Healing in Lightroom

Remove blemishes from *SpotHealing.tif*

Clone or *Heal* options

Click on the spot removal tool under the Histogram
Place the cursor on a blemish and simply click if the brush is big enough to cover the blemish.

Or drag if necessary to cover the blemish.
That's usually it. This tool tries to find a similar surface nearby with similar shading.

And it clones it in.
You can however, move the source circle.
And you can drag the edges of the circle.

In *heal* mode
It ignores color,
but blends the selection texture.

(demo clone vs heal by using a bad source area)

Notice you can adjust the opacity.
So you can blend in and make it more natural

Using the Lightroom Spot Healing tool for facial shadows.
Use spot removal tool on healing option

Opacity up temporarily.
Small brush and paint over shadow area.
Soften the shadow with opacity about 40

See Tool Overlay:
Auto, Always, Never options
To view without selection ants

Backslash key shows before and after.
And with Tool Overlay, you can turn the overlay selections on/off if you want to re-edit one of them.

Wrinkle and Blemish Removal

Try removing wrinkles from *wrinkles.jpg* or *eyes.jpg*

Summary: Use a copy of the background layer to edit with the patch tool.
Then blend with normal for the right balance with the under layer.

Brighten Eyes. Working with the image *wrinkles.jpg* Select the eyes with the *magnetic lasso*. Check for color balance. (Should be OK) Try using levels to lighten.

Retouch the wrinkles with the patch tool, using the layer opacity to adjust the final amount of wrinkle removal to about 60% reduction.

Minimizing the need for retouching

- Use a lower ISO speed to minimize the creation of artifacts.
- Use diffuse light. High contrast lighting shows up defects more. Especially light from the side.
- Watch out for unwanted elements in the viewfinder background. Watch out for “mergers.”

Brighten Eyes- Using Soft Light (a blending mode that uses the brightness of the over layer to control the brightness of the under layer) *widenEyes.jpg*

Why? We may need to increase the definition (contrast) of the eyes for a better focal point **by brightening the whites**. Since this is done on a layer, the opacity control can be used to set the amount of change.

- 1) Add a new layer by clicking on the **Create a new Layer** icon in the layers palette. Rename this layer to **Eyes**.
- 2) Select **Edit / Fill...** Select **50% Gray** and click **OK**.
- 3) Set the **blending mode** of this layer to **Soft Light**:

We made a 50% Gray layer with a blending mode of Soft Light. It will have no effect on our image. However... when we make parts of this gray layer darker or lighter it will actually effect the brightness values of the image underneath.

4) Select the **Dodge Tool** in the tool bar. With the Dodge Tool selected make sure that in the options bar the option **Exposure** is set to **100%**:

*Note: normally this value would be much lower (quite often below 10%) if we were to use this tool **directly** on an image (without using a 50% Gray layer), but this is not the case right now. The option **Range** doesn't matter; you can set it to any value because it doesn't have any effect on our results.*

Continue by changing the brush options of the Dodge Tool by clicking on the button marked with A. Set **Master Diameter** to **2** and **Hardness** to **0%**:

5) Zoom in on the left eye with **500%**. Move over the largest white areas and don't release the mouse button until an area is completed. Use the same approach for the right eye.

Turn the eyes layer off and on to see the difference.

Replacing Color

White shirt a little dingy?

Wrong color sweater for the gardening magazine cover? No problem...

We will use H/S with a powerful selection interface called **Replace Color**

Open **Collins_hairlight.jpg**

1) **Select** the sweater area generally. Trace around outside the sweater by 1/8" is ok. Since it is red, we just don't want to also affect the red lips or skin tone.

2) **Image > Adjustments > Replace Color**

3) Click on the sweater color with the **eyedropper** to select the basic color.

Shift-click to add pixels. and adjust **Fuzziness** until whole sweater is selected. Get them all if you can.

4) Slide the hue to change the color.

5) Tone it down with Saturation to make a more realistic sweater color.
Try brightness also until it looks normal.

6) Make it **match her eyes**. Once the red pixels are selected and fuzzied just right, click on color swatch **result** to bring up the picker. Use the picker eyedropper that appears to sample at 3x3 her eye color. Or match her lipstick...

Lightroom: Working on Selected Areas

Fix sky in ???? Taiwan panorama

Tool 4 under Histogram

Drag a window shade toward the area you don't want to edit.

Then edit for tone or color or

Tool 6 under Histogram

Paint an area to edit tone or color or

Content-Aware Fill

Getting Rid of Unwanted Detail

Fix the woodsStream image with the content-aware fill.

- Then touch up obvious doppelgangers with the clone tool.

Clone Stamp

Fix the Oaksdale image with the clone stamp.

- notice the gradient in the sky. Try clone stamp from above to see how different the tone is.

Try patch and content aware fill for line in sky. Then use the clone tool.

Finish on your own and turn in for extra credit.

Time for a **discussion of the Ethics of Retouching.**

Combining Images

Fix the contrast on the Carla at Dry Falls image
Then add the sky for fun.

Luminosity, Contrast, Saturation
Retouching: dryFalls1tofix.jpg

First look at the **color profile** assigned to the image.
Try changing it to Adobe RGB 1998 and see the difference!

1) **Analyze:** Sky is underexposed, almost washed out.
The rest is gray and low contrast because of the soft gray light from cloudy sky.

Could mostly be fixed with levels, but, what sky needs is the opposite of what the rest needs.

Could try Graduated Filter in LR, but not really enough details in the sky to become interesting.

2) Select sky with magic wand. **Tol 32contiguous**
Good time to use quick mask tool to tweek.
Save this selection!
Look at the **histogram**. Compressed!

3) Use levels and slide mid tone far to right.
Why does contrast happen?

4) Try selecting inverse and applying Levels to just the land.
Select inverse and bring in shadow end point, and adjust mid point.

Good idea to level the horizon? Try 2 degrees.
Not enough? **Don't add another degree**, because that doubles the processing and it is losing resolution each time. Undo and then try 3 degrees.

Bring in Another Sky Strategy

Select an area and drag in sky from other image
Look at **dryFallsGoodSky.jpg** taken little later.

1. Make duplicate copy of background.
2. Open the goodSky image. Use move tool to drag it in. Creates new layer automatically in CS2.
3. Adjust the layer stack if necessary.
4. Select the layer above it and select the sky area.
Delete the sky.
5. Select Show Transform Controls box
6. Increase window size and rotate the layer by dragging, until it lines up with the horizon.

What would a higher contrast sky do to the rest of the image? (ground and water). Make it more contrasty.

7. So select that area and tweak shadow endpoint with levels, then apply a little more contrast.

8. Horizon not blending quite right?
Load selection. Select > Modify > Expand by 4

Select > Feather by 4
Now cut again.
Horizon blends with sky better.

If the water was a bit more reflective, we would have to put a little upside down sky in it with a subtle blend.

Liquefying Activity

Open "**Smile Needed**"

Smile Enhancement: the 2017 CC version of PhotoShop has a new "face aware" section in **Filters > Liquify** that makes it easy to modify facial features in typical ways. Tools include eye size, smile, and facial shape.

Buffing-Up Editing Strategies with Liquefy

Two Businessmen

Notes. You don't get a second chance. It must be right on the first drag or you should undo it and try again. With a re-drag, obvious distortion starts to show up.

Filter > Liquify

Don't drag very far on something like this. Better too short than too long. However note the reconstruct options.

Reconstruct partially undoes last change
Restore All a full undo

Getting something moving you don't want?

Use the **freeze tool** to spray a mask.

Or use **mask all**, then **eraser tool** on left for the area you want to work in.

Then use the Drag tools. Get the right pixel size first. Movement is greatest at the middle of the circle and least at the edges.

Brush Size

Evident.

Try to make it cover the whole area to move.

Brush density

Less dense = less movement toward edge

Important for avoiding *unwanted* distortions.

Brush pressure

How fast the distortions are made.

Lower means you have more control.

Higher will do more with less movement.

Brush Rate

How fast it puckers or twirls.

Buffing-Up Editing Strategies with Liquefy

Two Businessmen

Analyze the image. It needs...

- Pull in the stomach.
- Pull up the pants a little.
- Tie should fall straight down.
- Get rid of form-forming shadow.
- Broaden shoulders a bit.
- Not to distort the background? Hard to do.
 - So we will work on layer copy.
 - Drag layer to new layer icon.
 - Work on top layer.

Probably should do tone and color before retouching?
Perhaps, but this will be like lens correction!

First work on right hand guy

- Freeze arm and taxi.
- Use large radius to pull in stomach and the hand with bag.
- Use large radius to pull up pants.
 - Center on belt buckle?
- Dodge darkness of "overhang" a little.

Shoulders

- Alternately freeze around each guy.
- Try a couple radii. Medium?

End Erase distorted taxi, buildings, etc. to reveal untouched layer below.

Key for using Liquefy effectively.

- Change the brush size often. Use the full size needed for single pulls.
- Make one careful large move, rather than numerous small ones. Don't pull too far.
- Use the freeze tool to anchor parts that shouldn't move.
- Place the center of the circle carefully so that you move pixels rather than simply stretching them.
- Put center on edge to pull, or even behind edge to pull.
- Lower brush pressure with higher brush density, keeps movement from being extreme.

Making a Nose Smaller With Liquefy

Took a portrait too close? Nose too big?

- 1) open *nose.jpg*
- 2) Filter > Liquefy

Alternate Way to Reduce a Big Nose

Use **Spherize** filter.

- 1) Open image, use mask layer with a radial gradient that leaves out the hair, ears, edges.
- 2) Use the Spherize inversely to shrink the middle of the face.

Other Liquefying Examples

OW1 First work on shape
Freeze arms

Use smaller radius first on tighter
Lower curve
Use larger radius second overall
Clone works well to GRO shadow

OW2 Open two versions of the image
Rotate one 12 degrees CCW
First select hand and arm in non-rotated one
Then inverse select
Then clone from rotated image

OW3 Analyze the image. It needs
Pull in the stomach.
Pull up the pants.
Move the suspenders back
Get rid of form forming shadow
Not distort the kid in back? Imposs

Study Questions about Editing

What blending mode did we use to change the hair color?
Overlay worked best. Normal is ok.

What was the secret to creating a glamorous glow?
We used Overlay to blend in a Gaussian blurred version of the image.

Which channel shows the most skin blemishes, Red Green or Blue? **Blue. Red shows the least.**

What is the difference between the patch tool and the healing brush?

What tools did we use to widen the eyes?

What is "content-aware" fill?

What are the secrets to using the liquefy tool effectively?