

Photoshop II

Hi, my name is Naomi Schmidt and I will be teaching the Photoshop Class
IN this class I will presume everyone knows the basics and will go from there. For more information on Photoshop: masks, layers, adjustments, transform, puppet warp manipulations of images. (which will be gone through in more detail in this class, color, hue saturation, how to save a file in what format etc.; below are sites you can visit and there are even more site links that I have put on my site for you if you just visit **www.naomigraphics.com/photoshop**. I have also put this hand out on my site, if you wanted to go to any of the sites I have mentioned in this handout – open this file on line, and click on the urls it will take you straight to the tutorial.

First Classes: I will give a over view of Photoshop Then we will start sampling from what we see on the screen - focusing on the tool panel.

Then: I will focus on the pallets (between the tool bar and the pallets) this cover a major part of Photoshop. Hopefully the second half of the class we will work on a projects.

Because all classes have different students with different needs, I shape the class from here on to those needs.

during the course we will cover:

- In depth about Layers - both palets and from menu and the difference
- In depth about Masks
- Transform and puppet warp
- the history palet
- retouching photos
(take out blemishes or just have fun)
adjustments, refining edges etc
- working with vector layers
- understanding channels and hisigram
- difference between smart objects and regular objects
- Fun: Effects, panoramas, Transforming, wraps and puppet warp
- covering personal wishes of the class for what they want to learn.

If there is something that I have not covered, and you wish to know - please ask.

Books

Visual Quickstart Guide - which will be used for this class (page references are to this book)

I have a link on my site to the Visual Quickstart Guide

There are many other books, look online or go into a book-store

URL's

tutorial & tips:

for Photoshop tutorials go to: <http://www.sitepoint.com/getting-started-photoshop/>

or, and this is a pretty good site:

http://www.extropia.com/tutorials/photoshop/menu_bar.html

What is dpi

concerning web and monitor:

www.library.cornell.edu/preservation/tutorial/presentation/presentation-06.html

http://www.alibony.com/resources/actions/layer_mask.htm

Color information

(there is so much information it can boggle your mind, but I think this site does it pretty well):

visual references to adjusting color:

info on hue, saturation etc:

http://courses.washington.edu/dmwork/ps_1_lesson_3.html

then general design information:

look on my website there are lots of sites

Also look on further pages, with page web suggestions for different behaviors.

Selection in Photoshop

Photoshop selects pixels based on one of the three properties, as shown in the image below:

Chroma: is the color of the pixel. Color of a pixel is the level of RGB values and color based select tools like the

Magic Wand. Select by color uses the RGB% as a criteria to group pixels based on the set tolerance values.

Luma: is a selection based on Illumination levels. Illumination levels are whiteness of the image, which is nothing but higher values for all the three R, G and B channels. Photoshop doesn't have a native interface for a Luma based selection, but many existing tools can be hacked to get a similar result.

Masks: are based on spatial position. Pixels are selected and discarded or masked by a parallel layer bound to corresponding image layer. Masks are grayscale and brightness of the mask is called an Alpha level, which is the degree of opaqueness of the corresponding layer pixel. It's also called the Transparency/Opaqueness channel as in RGBA etc.

<http://psd.tutsplus.com/tutorials/tools-tips/a-comprehensive-introduction-to-photoshop-selection-techniques/>

<http://akvis.com/en/photoshop-tips/selection-tools.php>

Similar

First use the magic wand to first select a color or range of colors, then go to the menu "Select: and choose similar, it will choose similar color throughout the image...but even better to the following

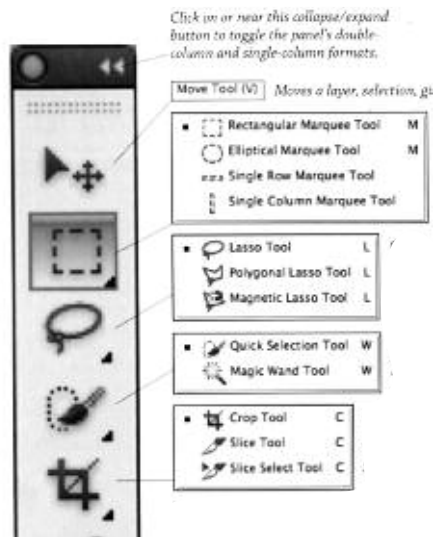
Color Range

The Color Range command selects a specified color or color subset within an existing selection or an entire image. If you want to replace a selection, be sure to deselect everything before applying this command.

To refine an existing selection, use the Color Range command repeatedly to select a subset of colors. For example, to select the green areas in a cyan selection, select Cyans in the Color Range dialog box, and click OK. Then reopen the Color Range dialog box, and select Greens. (The results are subtle because the technique selects parts of colors within a color mix.)

<http://tv.adobe.com/watch/photoshop-for-video/color-range-command/>

http://simplephotoshop.com/photoshop_tutorials/replace_color.htm



Quick Mask - see other sheet

To use Quick Mask mode, start with a selection and then add to or subtract from it to make the mask. You can also create the mask entirely in Quick Mask mode. Color differentiates the protected and unprotected areas. When you leave Quick Mask mode, the unprotected areas become a selection.

Photoshop Tips: Selecting with Quick Mask:

<http://www.makeuseof.com/tag/adobe-photoshop-tips-selecting-with-quick-mask/>

The Quick Mask Technique:

<http://photoshopcs6tutorials.net/background-masking-techniques-in-photoshop-part-4>

1 Natural selection

QuickMask 1: better selection



QUICKMASK IS THE MOST powerful tool for creating selections in Photoshop. It uses a red overlay to show the selected area, allowing you to see the image through it; when you leave QuickMask mode, the painted area will be selected.

In QuickMask, painting with black will add to the selection and painting with white will subtract from it (as long as you're set up as described below). This makes it easy to trace around any object: it's far quicker and more controllable than the Lasso tool, and in situations such as the one shown here it's the best solution.

The default setting is for QuickMask to highlight the masked (unselected) areas with a red overlay, leaving the selected areas transparent: I find it far preferable to work the other way around, so that the selected areas are highlighted. To change the settings, you need to double-click the QuickMask icon (near the bottom of the toolbar, just below the foreground/background color swatches) and use the settings shown above.



1 This image would be tricky to select using the Lasso tool, and impossible with the Magic Wand – the background and foreground are just too complex. Press **Q** to enter QuickMask mode so we can begin.



2 Using a hard-edged brush, begin to trace around the inside of the figure. You don't need to paint the whole figure in one go, so take it at your own pace and let the mouse button up every now and again to take a break.



6 With the basic outline selected, we can address the detail. Lower the brush size using **L** until you have a size that's small enough to paint in the outline detail comfortably.



7 Now the outline is selected, leave QuickMask by pressing **Q** again, and the selection will be shown as a familiar 'marching ants' outline. You can now press **⌘ J** / **ctrl J** to make a new layer from the selection.

How to Cheat in Photoshop CS6



3 It's easy to make a simple mistake when painting the outline, such as going over the edge by accident – as I've done at the elbow here. Don't simply press Undo, or you'll lose the whole brush stroke; there's a better way to correct the error.



4 To paint out the offending selection area, change the foreground color from black to white (the keyboard shortcut to do this is **X**). Paint over the mistake, then press **X** again to switch back to black to paint the rest of the selection.



5 You don't need to worry too much about fine detail at this stage – just get the basic figure highlighted. Fiddly areas, such as around the ear and the collar, can be left till later.



8 When the background is removed, we can see more clearly that the right side of the image is in really deep shadow – too deep to work with. Again, we can use QuickMask to select the shadow area.



9 Enter QuickMask again by pressing **Q**, and this time change to a soft-edged, larger brush. When we paint over the shadows now, we're creating a soft-edged selection; then leave QuickMask with **Q** again.



10 Because our selection has a soft edge, we can use any of the standard Adjustments to lighten up the shadow area (I've used Curves here) without showing a hard line between the changed and unchanged areas.



HOT TIP

You can mix hard and soft brushes within the same QuickMask session. For example, if you're cutting out a picture of a dog, you might use a soft-edged brush to trace around the fur, and a hard-edged brush to trace the outline of the nose and mouth. Soft brushes are the equivalent of feathering Lasso selections, but are very much more controllable.

SHORTCUTS

MAC WIN BOTH

How To Use Photoshop CS5's Refine Mask Feature: <http://www.youtube.com/watch?v=7Es4SjzoGRw>

Create a selection with any selection tool.

Click Refine Edge in the options bar, or choose Select > Refine Edge. Then set the following options:

View Mode From the pop-up menu, choose a mode to change how the selection is displayed. For information about each mode, hover the pointer over it until a tool tip appears. Show Original displays the original selection for comparison. Show Radius displays the selection border where edge refinement occurs.

Refine Radius and **Erase Refinements** tools Let you precisely adjust the border area in which edge refinement occurs. To quickly toggle from one tool to the other, press Shift+E. To change the brush size, press the bracket keys.

Brush over soft areas such as hair or fur to add fine details to the selection.

Smart Radius Automatically adjusts the radius for hard and soft edges found in the border region. Deselect this option if the border is uniformly hard- or soft-edged, or if you want to control the Radius setting and refinement brushes more precisely.

Radius Determines the size of the selection border in which edge refinement occurs. Use a small radius for sharp edges, and a large one for softer edges.

Smooth Reduces irregular areas ("hills and valleys") in the selection border to create a smoother outline.

Feather Blurs the transition between the selection and surrounding pixels.

Contrast When increased, soft-edged transitions along the selection border become more abrupt. Typically, the Smart Radius option and refinement tools are more effective.

Shift Edge Moves soft-edged borders inward with negative values or outward with positive ones. Shifting these borders inward can help remove unwanted background colors from selection edges.

Decontaminate Colors Replaces color fringes with the color of fully selected pixels nearby. The strength of color replacement is proportionate to the softness of selection edges.

Important: Because this option changes pixel color, it requires output to a new layer or document. Retain the original layer so you can revert back to it if needed. (To easily see changes in pixel color, choose Reveal Layer for the View Mode.)

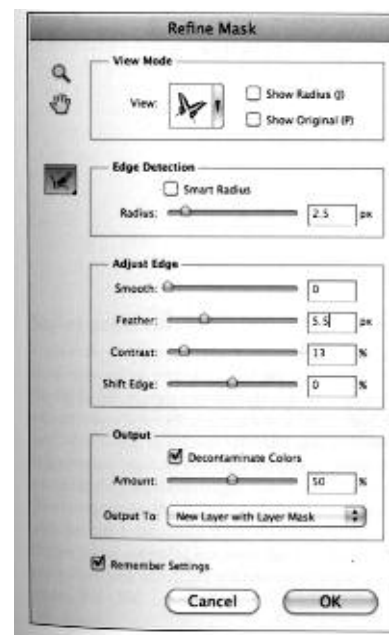
Amount Changes the level of decontamination and fringe replacement.

Output To Determines whether the refined selection becomes a selection or mask on the current layer, or produces a new layer or document.

<http://www.photoshopessentials.com/basics/layers/layer-masks/>

<http://designshack.net/articles/graphics/a-complete-beginners-guide-to-masking-in-photoshop/>

Masks- Refine Masks



selection and masks - 147

NOTE

Pressing down alt key- minus, subtract from selection

Pressing shift key adds to selection

quick selections - pg 152 - (really neat)

refining selections areas - pg 161

extracting an image

<http://www.photoshopcafe.com/tutorials/refine-edge/refine-edge.htm>

making a mask page 160

quick mask 166

mask panel 171

comparing selections methods pg 174

CHANNELS

Think of color "channels" as color "filters". Whenever Photoshop displays a color image on the screen, it knows which colors to display by shining a light through the filters. First it shines the light through the red filter (the red channel). If no amount of light passes through the filter, Photoshop knows to display red at a value of 0. If all of the light passes through the filter, Photoshop displays red at a full strength value of 255. If some lesser amount of light passes through, Photoshop displays red at a value somewhere between 0 and 255 depending on how much light passed through. Then it does the same thing with the green filter (the green channel), assigning green a value of 0 if no light passes through, 255 if all the light passes through, and some value in between if some but not all of the light passes through. Then it does it with the blue filter (the blue channel). When it's done, it knows what value to set for red, green and blue, and it combines them to create the color we see. It does this for every single pixel in your image, so if your image contains millions of pixels, as most photos from digital cameras these days do, Photoshop goes through this process millions of times just to display the image you see on your screen.

Color information channels are created automatically when you open a new image. The image's color mode determines the number of color channels created. For example, an RGB image has a channel for each color (red, green, and blue) plus a composite channel used for editing the image.

Alpha channels store selections as grayscale images. You can add alpha channels to create and store masks, which let you manipulate or protect parts of an image. (See About masks and alpha channels.)

Spot color channels specify additional plates for printing with spot color inks. (See About spot colors.)

An image can have up to 56 channels. All new channels have the same dimensions and number of pixels as the original image.

The file size required for a channel depends on the pixel information in the channel. Certain file formats, including TIFF and Photoshop formats, compress channel information and can save space. The size of an uncompressed file, including alpha channels and layers, appears as the right-most value in the status bar at the bottom of the window when you choose Document Sizes from the pop up menu.

As long as you save a file in a format supporting the image's color mode, the color channels are preserved. Alpha channels are preserved only when you save a file in Photoshop, PDF, TIFF, PSB, or raw formats. DCS 2.0 format preserves only spot channels. Saving in other formats may cause channel information to be discarded.

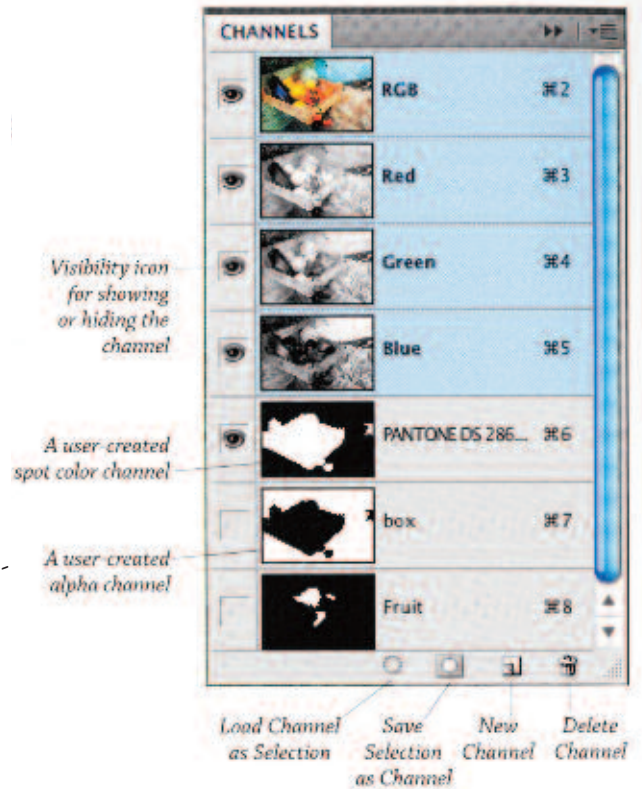
In the book see pages: Channels Palet - 110 • Saving and loading selections (masks) 160

<http://www.photoshopessentials.com/essentials/rgb/>

basic masking: <http://tv.adobe.com/watch/the-russell-brown-show/masking-basics-in-photoshop-cs5/>

channels: http://help.adobe.com/en_US/photoshop/cs/using/WS6EC2A68B-AE8D-4987-87E2-28272B744445a.html

http://www.youtube.com/watch?v=WEkce_QYZDI



Channels panel

The Channels panel displays a list of, and the thumbnails for, all the color channels in an image. To show an individual channel in the document window, click the channel name or press the keystroke listed on the panel. To redisplay the composite image (all the channels), such as RGB or CMYK, click the topmost channel on the panel, or press Ctrl-2/Cmd-2. (See pages 2-3.)

You can also use this panel to save and load alpha channels (which are saved selections). See page 160. And you can use it to create and store spot color channels, which commercial print shops use to produce individual color plates for predefined ink colors, such as PANTONE inks.

Retouch with the Clone Stamp tool

The Clone Stamp tool paints one part of an image over another part of the same image or over another part of any open document that has the same color mode. You can also paint part of one layer over another layer. The Clone Stamp tool is useful for duplicating objects or removing a defect in an image

(Photoshop Extended) You can also use the Clone Stamp tool to paint content on video or animation frames. See also Cloning content in video and animation frames (Photoshop Extended).

To use the Clone Stamp tool, you set a sampling point on the area you want to copy (clone) the pixels from and paint over another area. To paint with the most current sampling point whenever you stop and resume painting, select the Aligned option. Deselect the Aligned option to paint starting from the initial sampling point no matter how many times you stop and resume painting. You can use any brush tip with the Clone Stamp tool, which gives you precise control over the size of the clone area. You can also use opacity and flow settings to control how paint will be applied to the cloned area.

1. Select the Clone Stamp tool .
2. Choose a brush tip and set brush options for the blending mode, opacity, and flow in the options bar.
3. To specify how you want to align the sampled pixels and how to sample data from the layers in your document, set any of the following in the options bar:

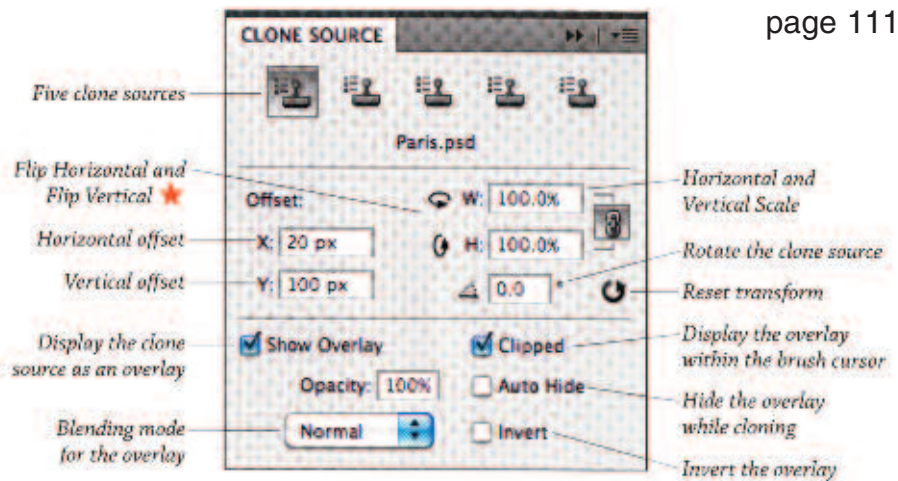
Aligned Samples pixels continuously, without losing the current sampling point, even if you release the mouse button. Deselect Aligned to continue to use the sampled pixels from the initial sampling point each time you stop and resume painting.

Sample Samples data from the layers you specify. To sample from the active layer and visible layers below it, choose Current And Below. To sample only from the active layer, choose Current Layer. To sample from all visible layers, choose All Layers. To sample from all visible layers except adjustment layers, choose All Layers and click the Ignore Adjustment Layers icon to the right of the Sample pop up menu.

4. Set the sampling point by positioning the pointer in any open image and Alt-clicking (Windows) or Option-clicking (Mac OS).

Note: Make sure you are not working on an adjustment layer. The Clone Stamp tool does not work on adjustment layers.

(Optional) In the Clone Source panel, click a clone source



button and set an additional sampling point.

You can set up to five different sampling sources. The Clone Source panel saves the sampled sources until you close the document.

(Optional) Do any of the following in the Clone Source panel:

- To scale or rotate the source that you're cloning, enter a value for W (width), H (height), or the rotation in degrees .
- To reverse the direction of the source (good for mirroring features like eyes), click the Flip Horizontal or Flip Vertical buttons.
- To show an overlay of the source that you're cloning, select Show Overlay and specify the overlay options.

Note: Select Clipped to clip the overlay to the brush size.

7. Drag over the area of the image you want to correct.

To the top

Puppet warp versus Transform warp

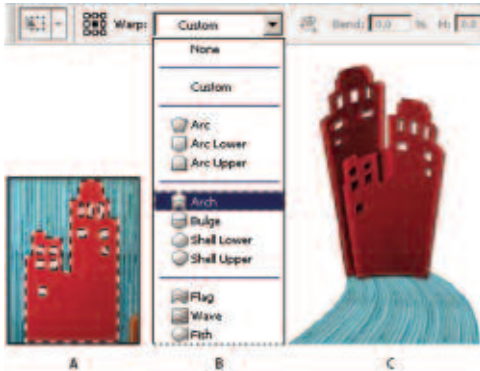
Transform Warp pg316

The Warp command lets you drag control points to manipulate the shape of images, shapes, or paths, and so on. You can also warp using a shape in the Warp Style pop up menu in the options bar. Shapes in the Warp Style pop up menu are also malleable; drag their control points.

When using the control points to distort an item, choosing View > Extras shows or hides the warp mesh and control points.

Using Warp

A. Selecting the shape to be warped **B.** Choosing a warp from the Warp Style pop up menu in the options bar **C.** Result using several warp options



1. Select what you want to warp.
2. Do one of the following:
 - Choose Edit > Transform > Warp.
 - If you chose a different transform command or the Free Transform command, click the Switch Between Free Transform And Warp Modes button in the options bar.
3. Do one or more of the following:
 - To warp using a specific shape, choose a warp style from the Warp pop up menu in the options bar.
 - To manipulate the shape, drag the control points, a segment of the bounding box or mesh, or an area within the mesh. When adjusting a curve, use the control point handles. This is similar to adjusting the handles in the curved segment of a vector graphic.

Manipulating the shape of a warp

- To change the reference point, click a square on the Reference point locator in the options bar.
- To specify the amount of warp using numeric values, enter the values in the Bend (set bend), X (set horizontal distortion) and Y (set vertical distortion) text boxes in the options bar. You can't enter numeric values if you have chosen None or Custom from the Warp Style pop up menu.

Note: When you warp a bitmap image (versus a shape or path), the image becomes slightly less sharp each time you commit a transformation; therefore, performing multiple commands before applying the cumulative transformation is preferable to applying each transformation separately.

<http://helpx.adobe.com/photoshop/using/transforming-objects.html>

<http://photoshopeducation.blogspot.com/2009/08/transforming-objects.html>

<http://www.deke.com/content/photoshop-cs5-top-5-puppet-warp-video>

put an object on a cup using warp - <http://joanbeiriger.blogspot.com/2009/08/photoshop-tip-using-warp-command-for.html>

free transform - <http://www.video2brain.com/en/videos-2881.htm>

Puppet Warp pg 314

Puppet Warp provides a visual mesh that lets you drastically distort specific image areas, while leaving other areas intact. Applications range from subtle image retouching (such as shaping hair) to total transformations (such as repositioning arms or legs).

In addition to image layers, you can apply Puppet Warp to layer and vector masks. To nondestructively distort images, use Smart Objects.


1. In the Layers panel, select the layer or mask you want to transform.
2. Choose Edit > Puppet Warp.
3. In the options bar, adjust the following mesh settings:

Mode Determines the overall elasticity of the mesh. Choose *Distort* for a highly elastic mesh good for warping wide-angle images or texture maps.

Density Determines the spacing of mesh points. More Points increases precision but requires more processing time; Fewer Points does the opposite.

Expansion Expands or contracts the outer edge of the mesh.

Show Mesh Deselect to show only adjustment pins, providing a clearer preview of your transformations. To temporarily hide adjustment pins, press the H key.

3. In the image window, click to add pins to areas you want to transform and areas you want to anchor in place. Moving a pin on the puppet mesh. Adjoining pins keep nearby areas intact.
4. To reposition or remove pins, do any of the following:
 - Drag pins to warp the mesh.
 - To reveal a mesh area you've overlapped with another, click the Pin Depth buttons in the options bar.
 - To remove selected pins, press Delete. To remove other individual pins, place the cursor directly over them, and press Alt (Windows) or Option (Mac OS); when the scissors icon appears, click.
 - Click the  "Remove All Pins button" in the options bar. To select multiple pins, Shift-click them or choose Select All from the context menu.
5. To rotate the mesh around a pin, select it, and then do either of the following:
 - To rotate the mesh a fixed number of degrees, press Alt (Windows) or Option (Mac OS), and position the cursor near to, but not over the pins. When a circle appears, drag to visually rotate the mesh. The degree of rotation appears in the options bar.
 - To rotate the mesh automatically based on the selected Mode option, choose Auto from the Rotate menu in the options bar.

When your transformation is complete, press Enter or Return.

Liquify

What is it?

From photo retouching, to artistic effects, the Liquify filter is a powerful tool for every Photoshop user. This filter allows us to push, pull, rotate, reflect, pucker, and bloat the pixels of any image. Today, I will show you the basics of this filter. Grab a bunch of images to practice with and let's get it started!

The Liquify filter may be applied to any bitmap Layer but unfortunately cannot be applied to a Smart Object. You can access the Liquify Filter window by clicking Filter > Liquify, or by pressing Shift + Command (Ctrl) + X on your keyboard.

Tools

Forward Warp Tool (W) The most basic tool that you may use is the Forward Warp, basically pushes the pixels of the image forward as you drag. You can control the amount of pixels pushed by changing the brush size in the Brush Options on the right panel. The larger the brush the more pixels will be pushed forward. Once you apply this effect, you must click on the OK button on the right panel to commit the changes.

Brush Pressure This value controls the speed at which distortions are made when you drag the brush. This value can be set from 0 to 100, being 0 the lowest pressure and 100 the highest. Using a low brush pressure makes changes occur more slowly, so it's easier to stop them at exactly the right moment.

Mirror Tool (M) This tool works exactly like a mirror. The pixels perpendicular to the direction of the stroke will be duplicated depending on the stroke direction the mirror pixels could be below (left – right stroke) or above (right – left). This works much better if you make horizontal or vertical parallel strokes. Hold the Option (Alt) key while drag will invert the reflected pixels' source to the opposite angle.

Masks – Freeze and Thaw Masks You can protect some areas of the image from changes by using a Freeze Mask. In the Tool bar, click on the Freeze Mask button and paint the areas you want to keep unchanged. The Thaw mask works just like a mask eraser. Use this tool like the other Liquify tools; you can control the brush's Size, Density and Pressure. After Masking an area and applying it, the masked area will remain unchanged.

Mask Options The mask Options panel, at the right side of the Liquify window allow you to choose Selection, Layer Mask, Transparency, or Quick Mask to create

masks on the image.

You can also edit previously created masks as well by choosing Replace, Add, Subtract, Intersect or Invert.

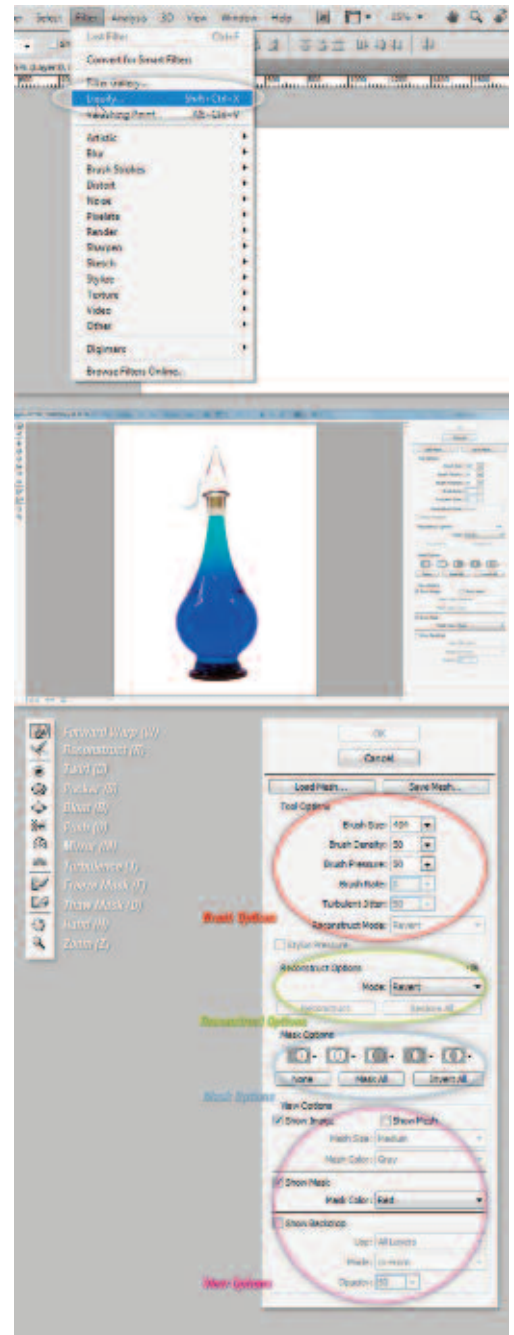
Reconstruct All After distorting, you may need to reconstruct some areas here and there. There are many creative ways to reconstruct the distortions with the Liquify filter. The simplest way to do this is by clicking the Restore All Button on the Reconstruct Options Panel.

Reconstruct Tool and Reconstruct Options

The Reconstruct Tool allows you to use a Brush to reconstruct certain areas of the previously distorted image. By default the Reconstruct Mode (at the Reconstruct Options panel on the right side) is Revert, which means the image will return to its original state. There are many other options with different behaviors depending the distortion position relative to a frozen area. These options are very interesting but a little complicated, so we will leave them for another (more practical) tutorial. **Auto Reconstruct** On the Reconstruct Options Panel, there's a button labeled Reconstruct. By pressing it you can auto reconstruct the image using one of the options on the list.

View Mesh and Masks The Mesh is a bi-dimensional grid than can be shown or hidden in the View Options Panel. You can increase or decrease the Mesh Size, and change its color. The Mesh and Masks can be shown or hidden from this panel and its color can be changed.

Every distortion made with any of the previously mentioned tools can be saved as a Mesh, to do this, click on the Save Mesh button in the Options Panel. A saved Mesh can be opened and be re-applied to any other image by clicking on the Load Mesh button.



Backdrops Backdrops show additional layers aside from the Layer actually being edited. In a multiple layer document, chose the layer you want to distort and open the Liquify Filter Window. On the View Options Panel check the Show Backdrop checkbox to show the additional layers in the document. You can easily show or hide them, or change its opacity.

Alternative to Plastic Surgery The Forward Warp Tool can be easily used to fix imperfections on any photograph. In the following example, we use two brush sizes to transform this girl's nose and chin, and even make her smile just a little bit.

<http://psd.tutsplus.com/tutorials/tools-tips/a-comprehensive-guide-to-photoshops-liquify-tool/>

<http://www.youtube.com/watch?v=sKu1HGmUuU>

Smart Objects

[pags 86, 310] Smart Objects are layers that contain image data from raster or vector images, such as Photoshop or Illustrator files. Smart Objects preserve an image's source content with all its original characteristics, enabling you to perform nondestructive editing to the layer.

You can create Smart objects using several methods: by using the Open As Smart Object command; placing a file, pasting data from Illustrator; or converting one or more Photoshop layers to Smart Objects.

With Smart Objects, you can:

- **Perform nondestructive transforms.** You can scale, rotate, skew, distort, perspective transform, or warp a layer without losing original image data or quality because the transforms don't affect the original data.
- **Work with vector data**, such as vector artwork from Illustrator, that otherwise would be rasterized in Photoshop.
- **Perform nondestructive filtering.** You can edit filters applied to Smart Objects at any time.
- **Edit one Smart Object and automatically update all its linked instances.**
- **Apply a layer mask** that's either linked or unlinked to the Smart Object layer.
- Try various designs with low-resolution placeholder images that you later replace with final versions.
- **You can't perform operations that alter pixel data**—such as painting, dodging, burning, or cloning—directly to a Smart Object layer, unless it is first converted into a regular layer, which will be rasterized. To perform operations that alter pixel data, you can edit the contents of a Smart Object, clone a new layer above the Smart Object layer, edit duplicates of the Smart Object, or create a new layer.

Note: When you transform a Smart Object that has a Smart Filter applied to it, Photoshop turns off filter effects while the transform is being performed. Filter effects are applied again after the transform is complete.

Any filter applied to a Smart Object is a Smart Filter. Smart Filters appear in the Layers panel below the Smart Object layer to which they are applied. Because you can adjust, remove, or hide Smart Filters, they are nondestructive.

You can apply any Photoshop filter (that have been enabled to work with Smart Filters)—except for Extract, Liquify, Pattern Maker, and Vanishing Point—as a Smart Filter. In addition, you can apply the Shadow/Highlight and Variations adjustments as Smart Filters.

To expand or collapse the view of Smart Filters, click the triangle next to the Smart Filter icon, displayed to the right of the Smart Object layer in the Layers panel. (This technique also shows or hides Layer Style.) Or, choose Layers panel Options from the Layers panel menu, then select Expand New Effects in the dialog box.

<http://www.video2brain.com/en/lessons/what-are-smart-objects>

<http://www.deke.com/content/photoshop-cs5-top-5-puppet-warp-video>

put an object on a cup using warp - <http://joanbeiriger.blogspot.com/2009/08/photoshop-tip-using-warp-command-for.html>

Smart Filters

Any filter applied to a Smart Object is a Smart Filter. Smart Filters appear in the Layers panel below the Smart Object layer to which they are applied. Because you can adjust, remove, or hide Smart Filters, they are nondestructive.

You can apply any Photoshop filter (that have been enabled to work with Smart Filters)—except for Extract, Liquify, Pattern Maker, and Vanishing Point—as a Smart Filter. In addition, you can apply the Shadow/Highlight and Variations adjustments as Smart Filters.

To work with Smart Filters, select a Smart Object layer, choose a filter, and then set filter options. After you apply a Smart Filter, you can adjust, reorder, or delete it.

To expand or collapse the view of Smart Filters, click the triangle next to the Smart Filter icon, displayed to the right of the Smart Object layer in the Layers panel. (This technique also shows or hides Layer Style.) Or, choose Layers panel Options from the Layers panel menu, then select Expand New Effects in the dialog

<http://www.bigstockphoto.com/blog/what-are-smart-filters-and-why-should-i-use-them/> box.

<http://photoshop-tutorials.wonderhowto.com/how-to/use-smart-filters-adobe-photoshop-cs5-402494/>

Mask Smart Filters

When you apply a Smart Filter to a Smart Object, Photoshop displays an empty (white) mask thumbnail on the Smart Filters line in the Layers panel under the Smart Object. By default, this mask shows the entire filter effect. (If you made a selection before applying the Smart Filter, Photoshop displays the appropriate mask instead of an empty mask on the Smart Filters line in the Layers panel.)

Use filter masks to selectively mask Smart Filters. When you mask Smart Filters, the masking applies to all Smart Filters—you can't mask individual Smart Filters.

Filter masks work much like layer masks, and you can use many of the same techniques with them. Like layer masks, filter masks are stored as alpha channels in the Channels panel, and you can load their boundaries as a selection.

Like layer masks, you can paint on a filter mask. Areas of the filter that you paint in black are hidden; areas you paint in white are visible; and areas you paint in shades of gray appear in various levels of transparency.

Use the controls in the Masks panel to change the filter mask density, add feathering to the edges of the mask, or invert the mask.

<http://www.creativepro.com/article/how-use-photoshop-smart-filters>

Blur

Average Finds the average color of an image or selection, and then fills the image or selection with the color to create a smooth look. For example, if you select an area of grass, the filter changes the area into a homogeneous patch of green.

Blur and **Blur More** Eliminate noise where significant color transitions occur in an image. **Blur** filters smooth transitions by averaging the pixels next to the hard edges of defined lines and shaded areas. The effect of the **Blur More** filter is three or four times stronger than that of the **Blur** filter.

Gaussian Blur [pg290] Quickly blurs a selection by an adjustable amount. **Gaussian** refers to the bell-shaped curve that is generated when Photoshop applies a weighted average to the pixels. The **Gaussian Blur** filter adds low-frequency detail and can produce a hazy effect.

Note: When **Gaussian Blur**, **Box Blur**, **Motion Blur**, or **Shape Blur** are applied to a selected image area, they will sometimes produce visually unexpected results near the edges of the selection. This is because these blur filters will use image data from outside the selected area to create the new, blurred pixels inside the selected area. For example, if the selection represents a background area that you want to blur while keeping the foreground sharp, the edges of the blurred background area will be contaminated with colors from the foreground, producing a fuzzy, muddy-looking outline around the foreground. To avoid this effect in such cases, you can use **Smart Blur** or **Lens Blur**.

Lens Blur [pg288] Adds blur to an image to give the effect of a narrower depth of field so that some objects in the image stay in focus and others areas are blurred. See **Add lens blur**.

Smart Blur Blurs an image with precision. You can specify a radius, a threshold, and a blur quality. The **Radius** value determines the size of the area searched for dissimilar pixels. The **Threshold** value determines how dissimilar the pixels must be before they are affected. You also can set a mode for the entire selection (**Normal**) or for the edges of color transitions (**Edge Only** and **Overlay Edge**). Where significant contrast occurs, **Edge Only** applies black-and-white edges, and **Overlay Edge** applies white.

Surface Blur [pg275] Blurs an image while preserving edges. This filter is useful for creating special effects and for removing noise or graininess. The **Radius** option specifies the size of the area sampled for the blur. The **Threshold** option controls how much the tonal values of neighboring pixels must diverge from the center pixel value before being part of the blur. Pixels with tonal value differences less than the **Threshold** value are excluded from the blur.

Sharpen

[296-298 & 299-300]-**Sharpening** enhances the definition of edges in an image. Whether your images come from a digital camera or a scanner, most images can benefit from sharpening. The degree of sharpening needed varies depending on the quality of the digital camera or scanner. Keep in mind that sharpening cannot correct a severely blurred image.

Tips for better sharpening:

Sharpen your image on a separate layer and make it a smart object.

If you sharpen your image on a separate layer, set the layer's blending mode to **Luminosity** to avoid color shifts along edges.

Sharpening increases image contrast. If you find that highlights or shadows are clipped after you sharpen, use the layer blending controls (if you sharpen a separate layer) to prevent sharpening in highlights and shadows.

If you need to reduce image noise, do so before sharpening so that you don't intensify the noise.

Sharpen your image multiple times in small amounts. Sharpen the first time to correct blur caused by capturing your image (scanning it or taking it with your digital camera). After you've color corrected and sized your image, sharpen it again (or a copy of it) to add the appropriate amount of sharpening for your output medium.

Sharpen using Smart Sharpen

The **Smart Sharpen** filter has sharpening controls not available with the **Unsharp Mask** filter. You can set the sharpening algorithm or control the amount of sharpening that occurs in shadow and highlight areas.

Set the controls in the **Sharpen** tabs:

Amount Sets the amount of sharpening. A higher value increases the contrast between edge pixels, giving the appearance of greater sharpness.

Radius Determines the number of pixels surrounding the edge pixels affected by the sharpening. The greater the radius value, the wider the edge effects and the more obvious the sharpening.

Remove Sets the sharpening algorithm used to sharpen the image. **Gaussian Blur** is the method used by the **Unsharp Mask** filter. **Lens Blur** detects the edges and detail in an image, and provides finer sharpening of detail and reduced sharpening halos. **Motion Blur** attempts to reduce the effects of blur due to camera or subject movement. Set the **Angle** control if you choose **Motion Blur**.

Angle Sets the direction of motion for the **Motion Blur** option of the **Remove** control.

More Accurate Processes the file more slowly for a more accurate removal of blurring.

Adjust sharpening of dark and light areas using in the **Shadow** and **Highlight** tabs. (Click the **Advanced** button to display the tabs). If the dark or light sharpening halos appear too strong you can reduce them with these controls, which are only available for 8 bits and 16 bits-per-channel images:

Fade Amount Adjusts the amount of sharpening in the highlights or shadows.

Tonal Width Controls the range of tones in the shadows or highlights that are modified. Move the slider to the left or right to decrease or increase the **Tonal Width** value. Smaller values restrict the adjustments to only the darker regions for shadow correction and only the lighter regions for highlight correction.

Radius Controls the size of the area around each pixel that is used to determine whether a pixel is in the shadows or highlights. Moving the slider to the left specifies a smaller area, and moving it to the right specifies a larger area.

Fill: (Under Edit)

Fill a selection or layer with color In the Fill dialog box, choose one of the following options for Use, or select a custom pattern: Foreground Color, Background Color, Black, 50% Gray, or White. Fills the selection with the specified color.

give your selection an outline To create shape or layer borders that can be turned on or off like overlays and are anti-aliased to create softer-edged corners and edges, use the Stroke layer effect instead of the Stroke command. See Layer effects and styles.

Content-aware, pattern, or history fills **Content-aware** (pg 284) fills randomly synthesize similar image content. If you don't like your original results, choose Edit > Undo, and apply another Content-aware fill.

Layers - Blending Options

The blending mode specified in the options bar controls how pixels in the image are affected by a painting or editing tool. It's helpful to think in terms of the following colors when visualizing a blending mode's effect:

The base color is the original color in the image.

The blend color is the color being applied with the painting or editing tool.

The result color is the color resulting from the blend.

<http://www.video2brain.com/en/lessons/advanced-blending-options>

<http://www.photoshopessentials.com/photo-effects/blend-if/>

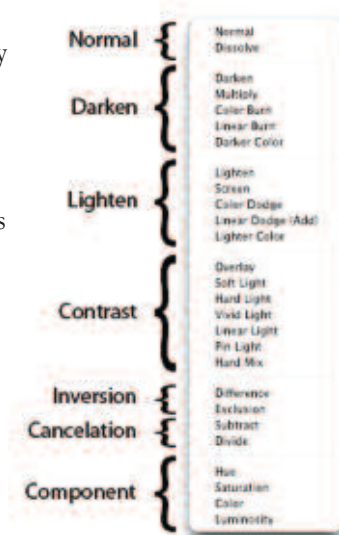
<http://www.photoshopgurus.com/tutorials/t010.html>

how all the blending options work

Photoshop and Elements allow for layer blend modes that change the way layers react with each other. Some of them you will use in every day work. If you have a photo that is too dark, for example, many times a quick fix is to duplicate the photo layer in the layers palette and change the duplicate layer mode to Screen. If a photo is too light it can sometimes be corrected by duplicating the photo layer and changing the layer mode to Multiply.

<http://www.northlite.net/ps/blend.htm>

<http://photoblogstop.com/photoshop/photo-shop-blend-modes-explained>



Techniques for nondestructive editing

Nondestructive editing allows you to make changes to an image without overwriting the original image data, which remains available in case you want to revert to it. Because nondestructive editing doesn't remove data from an image, the image quality doesn't degrade when you make edits. You can perform nondestructive editing in Photoshop in several ways:

Working with adjustment layers Adjustment layers apply color and tonal adjustments to an image without permanently changing pixel values.

Transforming with Smart Objects Smart Objects enable nondestructive scaling, rotating, and warping.

Filtering with Smart Filters Filters applied to Smart Objects become Smart Filters and allow for nondestructive filter effects.

Adjusting variations, shadows, and highlights with Smart Objects Shadow/Highlight and Variations commands can be applied to a Smart Object as Smart Filters.

Retouching on a separate layer **Clone Stamp**, **Healing Brush**, and **Spot Healing Brush** tools let you retouch non-destructively on a separate layer. Be sure to select Sample All Layers from the options bar (select Ignore Adjustment Layers to ensure that adjustment layers won't affect the separate layer twice). You can discard unsatisfactory retouching, if necessary.

Cropping non-destructively After you create a cropping rectangle with the Crop tool, select Hide from the options bar to preserve the cropped area in a layer. Restore the cropped area anytime by choosing Image > Reveal All or by dragging the Crop tool beyond the edge of the image. The Hide option is unavailable for images that contain only a background layer.

Masking Layer and vector masks are nondestructive because you can re edit the masks without losing the pixels they hide. Filter masks let you mask out the effects of Smart Filters on Smart Object layers.

Editing in Camera Raw Adjustments to batches of raw, JPEG, or TIFF images preserve the original image data. Camera Raw stores adjustment settings on a per-image basis separately from the original image files.

Opening Camera Raw files as Smart Objects Before you can edit Camera Raw files in Photoshop, you must configure settings for them with Camera Raw. Once you edit a Camera Raw file in Photoshop, you can't reconfigure Camera Raw settings without losing the changes. Opening Camera Raw files in Photoshop as Smart Objects enables you to reconfigure Camera Raw settings at any time, even after you edit the file.

HDR toning

High dynamic range imaging (HDRI or HDR) is a set of methods used in imaging and photography, to allow a greater dynamic range between the lightest and darkest areas of an image than current standard digital imaging methods or photographic methods. HDR images can represent more accurately the range of intensity levels found in real scenes, from direct sunlight to faint starlight, and is often captured by way of a plurality of differently exposed pictures of the same subject matter.

This can be used for great contrast, but also just as an all-in-one adjustment technique - that is the good news

Bad news it can only be done to a flattened image - but the work around with that is to make it a smart object, then work on the smart object in its own document and create HDR toning.

<http://blog.video2brain.com/en/hdr-toning-effect-with-photoshop-cs6-3605.htm>

<http://planetphotoshop.com/hdr-toning-workflow-tip.html>

<http://www.peachpit.com/articles/article.aspx?p=1688702>

<http://tv.adobe.com/watch/learn-photoshop-cs5/using-faux-hdr-toning/>

Gamma

Gamma encoding of images is required to compensate for properties of human vision, to maximize the use of the bits or bandwidth relative to how humans perceive light and color.[1] Human vision under common illumination conditions (not pitch black or blindingly bright) follows an approximate gamma or power function. If images are not gamma encoded, they allocate too many bits or too much bandwidth to highlights that humans cannot differentiate, and too few bits/bandwidth to shadow values that humans are sensitive to and would require more bits/bandwidth to maintain the same visual quality.[1][2] Gamma encoding of floating point images is not required (and may be counterproductive) because the floating point format already provides a pseudo-logarithmic encoding.

Layer Comps

The concept of the Layer Comps is very simple, it's just a quick way to take a "snapshot" of which layers are turned on and which layers are turned off in your document. Think "compositions". Some Adobe Photoshop files get to be VERY complicated in terms of number of layers, and it can be useful and efficient to be able to jump back and forth between different "states" of your document.

<http://tutorialblog.org/how-to-use-layer-comps-in-photoshop/>

http://help.adobe.com/en_US/photoshop/cs/using/WSfd1234e1c4b69f30ea53e41001031ab64-7870a.html

<http://www.creativepro.com/article/creative-thinking-in-photoshop-using-layer-comps-to-create-variations>

Actions & Automations

An action is a series of tasks that you play back on a single file or a batch of files—menu commands, panel options, tool actions, and so on. For example, you can create an action that changes the size of an image, applies an effect to the image, and then saves the file in the desired format.

Actions can include steps that let you perform tasks that cannot be recorded (for example, using a painting tool). Actions can also include modal controls that let you enter values in a dialog box while playing an action.

In Photoshop, actions are the basis for droplets, which are small applications that automatically process all files that are dragged onto their icon.

Photoshop and Illustrator come with predefined actions installed that help you perform common tasks. You can use these actions as is, customize them to meet your needs, or create new actions. Actions are stored in sets to help you organize them.

You can record, edit, customize, and batch-process actions, and you can manage groups of actions by working with action sets.:

http://help.adobe.com/en_US/photoshop/cs/using/WSfd1234e1c4b69f30ea53e41001031ab64-7451a.html

<http://www.dpreview.com/articles/0567301971/automating-photoshop>

Note: if in part of the action eg, cropping an image which would be idifferent each time you can make the automation pause to custom crop then let it go on with its actions, to do this:

Go to the Actions panel and open the disclosure triangle to display all the steps in the action. Click in the empty box next to the Crop step. A grey icon appears (highlighted here in red), which indicates the action will pause at that step.

The next time you run this action it will pause after the crop is drawn, allowing you to adjust it however you wish. As soon as you commit to the crop, the action automatically resumes, performing the rest of the steps.

Automate - Batch Process, To batch-process using multiple actions, create a new action that plays all the other actions, and then batch-process using the new action. To batch-process multiple folders, create aliases within a folder to the other folders you want to process, and select the Include All Subfolders option.

Got to file, select a Automate, then Batc. Select Action you wish to use, select source,

this has good screen shots of what you will see:

<http://digital-photography-school.com/how-to-batch-resize-in-photoshop>

http://help.adobe.com/en_US/photoshop/cs/using/WSfd1234e1c4b69f30ea53e41001031ab64-7427a.html#WSfd1234e1c4b69f30ea53e41001031ab64-7425a