Scholarship on the Web: Editing Engravings-Matting Photoshop

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Introduction

Many historians use or wish to use illustrations on their web pages or scholarly work and, for historians, images come in two forms: continuous tone images (photographs) or line drawings (engravings or woodcuts,). Photographs normally present few problems. Historians who work on topics before the advent of photography or with sources that could not include photographs for technical reasons are limited to line drawings, most often engravings or some engraving variant. The images in nineteenth-century newspapers or periodicals, such as *Leslie's Illustrated Weekly* or *Godey's Lady's Book* respectively, are primarily engravings.

Oftentimes, historians are disappointed in the products of their image experiments. The images are poor from the outset—foxed, watermarked, or faded. The inks have oxidized and produced a rainbow of colors, or the paper has deteriorated. Most often, the image background does not match the parent document's background. Some of these defects result from poor scans or the vagaries of digital camera images; others result from the fact that the images are just plain old.

Whatever the state of image, this tutorial aims to make matting (changing the background of) line drawings, specifically engravings for the web and print, a relatively straight-forward task. There are several advantages to learning how to deal with engravings. First, historians can illustrate their web pages in a reasonably professional manner. Second, they can create their own art, lending a historical ambiance to their web sites and assuring themselves of compliance with copyright law. And third, historians can prepare images for their print publications without recourse to the publisher, resulting in more royalties—such as they are—for the author.

What You Will Need

First, you will need Adobe *Photoshop* for this tutorial. *Photoshop* is available at an academic discount and is the flagship image editing program. If your image editing needs are modest, you may not need *Photoshop* and can get along with Adobe *Elements*. Second, you will need the right kind of image. Engravings available for educational use abound on the web. Good sources are: American Memory at the Library of Congress, Making of America at Cornell University, and Making of America

at University of Michigan. For last two, finding illustrations is a bit more difficult because the search engine does not specifically index images. Searching a particular subject in periodicals likely to have illustrations produces the best results. Part of Making of America is also available through American Memory.

The Goal

The goal for these tutorials is to matte an engraving onto a different background. In other words, we'll take an engraving and drop out its existing background and place it on a new background, resize the image, and prepare it for the web. For those who wish to follow along and use the image employed in the tutorial, the image, "Home Guard," can be downloaded from the Library of Congress website. Be aware that the American Memory folks are professionals and know how to make good scans, so we'll start off on the right foot. This tutorial assumes that you have basic familiarity with a computer and can carry out the basics of file management and mouse maneuvers. The tutorial steps follow the standard convention of choosing a menu and a selection, so "Choose Window > Layers" translates into going to the Window Menu on the menu bar and selecting Layers.

Adobe Photoshop: Engravings

The technique employed in matting Adobe *Elements* can also be used in *Photoshop*, but there is an easier way. Like most software applications, Adobe *Photoshop* supports a number of different ways of approaching a problem and an equal number of techniques. This tutorial uses the "menu" approach as opposed to the "keyboard command" strategy for sake of simplicity. If you are comfortable using keyboard commands, substitute accordingly.

Our first task is to crop the image and correct the color. But before tackling the image, be sure that the Layer (Choose Window > Layers) and History (Choose Window > History) palettes open and accessible and that your tools are handy. At this juncture, it's also advisable to tend to housekeeping: create a folder for your images and a file-naming regimen.

1. Choose File > Open

2. Select the Crop Tool

3. Click and drag to select an area.

For those using the tutorial image, select an area on the image that includes the woman and text but excludes the black border. The key to cropping is to crop closely, focusing on the center of interest in the image.

4. Press RETURN or ENTER

5. Select Image > Adjust > Auto Color Correction.

6. Select Image > Adjust > Auto Contrast.

7. Select Image > Adjust > Auto Levels.

OK. Now we'll put in the new background and set up the image for editing. For our purposes of this exercise, the new background will be white. We must convert the locked background layer to an editable layer.
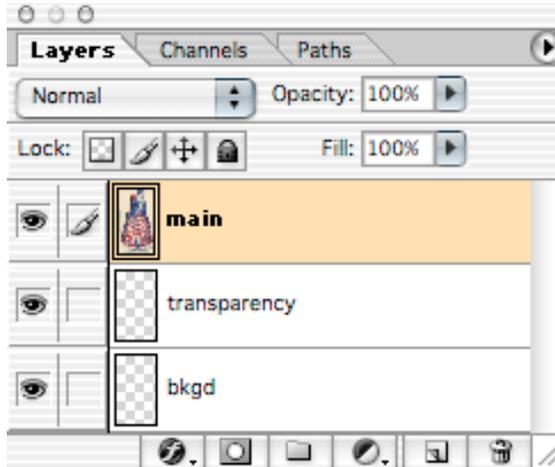

1. Double-click the name of the "Background" layer.

2. Type "main" in the dialogue box.

3. Click OK.

4. Choose Layer > New > Layer.

5. Type "bkgd" in the dialogue box.

6. Click OK.

7. Choose Layer > New > Layer.

8. Type "transparency" in the dialogue box.

9. Click OK.

The order of the layers is important in this technique. At this point you can use your own background color or texture.
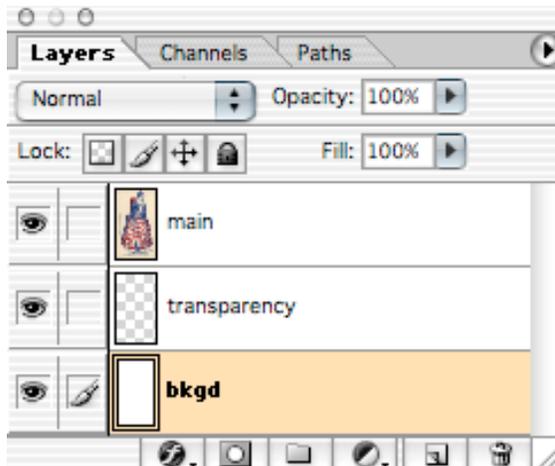
1. Arrange the layers by clicking and dragging the layers until they are in the order shown on the left.

2. Select the "bkgd" layer by clicking it.

3. Be sure that the foreground color chip is white.

4. Choose Edit > Fill.

Be sure that you select the "main layer." Selecting any of the other layers will produce no results and puzzlement.
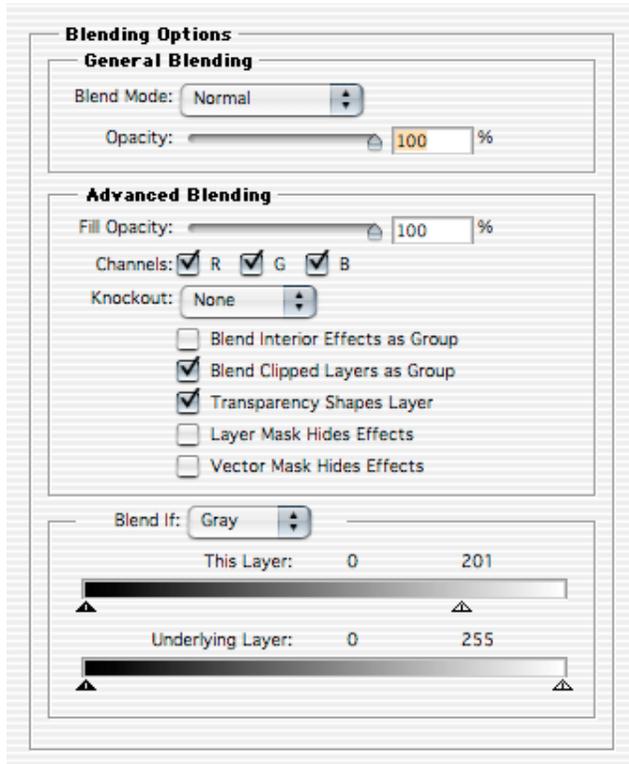
1. Select the "main" layer by clicking it.

2. Choose Layer > Layer Style > Blending Options.

3. In the Blend If box, drag the This Layer slider to the left until as much of the background as possible disappears.

Use the Eraser or Paint Brush tools to touch up any remaining defects in the image.

Time to resize the image. Note the dimensions and resolution of the image. If you are using the "Home Guard," you'll not that it has been scanned at a very high resolution—far too high for a web image.
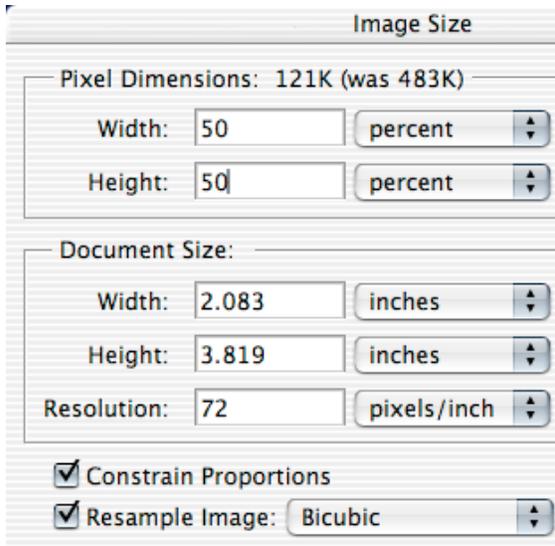
1. Choose Image > Resize Image.

2. Type 72 in the Resolution area of the dialogue box.

3. Select Percent from the pull down menu.

4. Type 50 in the Height or Width.

5. Click OK.

6. Choose Layer > Flatten Image.

7. Click OK.

Since the image has lost some data in the down sampling process, it has become a bit blurry. We'll restore some of the detail by using the Unsharp Mask filter.
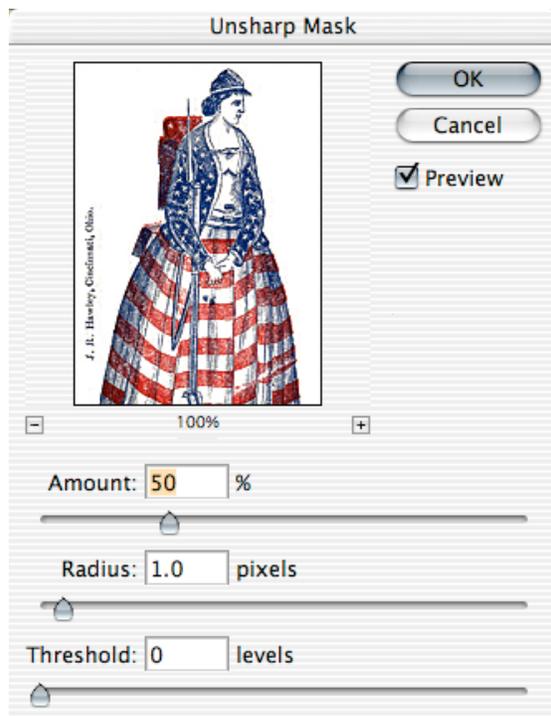
1. Choose Filter > Unsharp Mask.

2. Set the sliders to the following settings:

   Amount=50%
   Radius=1
   Threshold=0

You may need to use different settings to sharpen your image sufficiently. One of the best ways is to exaggerate the settings by moving the Amount slider to the far right and then by moving the slider to the left in increments until you get the result that you wish.

The last step involves preparing the image for the Web. Note that it is still possible to reduce the quality setting of the image markedly and still achieve excellent results—and a small image.
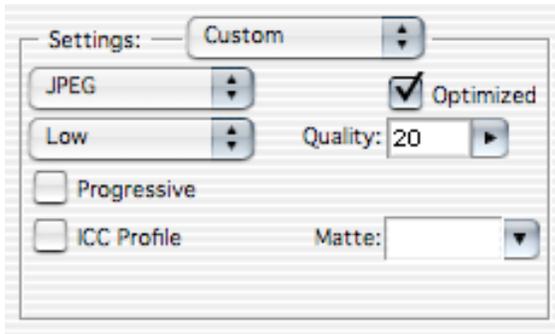
1. Choose File > Save for Web.

2. Select GIF or JPEG from the drop down menu.

3. Adjust colors and quality.

   JPEG
   Low
   Optimized
   Quality=20

4. Click OK.

The image can be either a JPEG or a GIF, although engravings turn out best as JPEG, given the fine lines that comprise an engraving. Creating a GIF requires making the white portions of the image transparent. Selecting and deleting the white portions of the image invariably destroys some of the fine lines and detail. For this reason, it is advisable to matte an image to a background color or texture before importing it into an HTML editor.

There are some images that that are so damaged that they will resist this approach. It's important to gauge whether or not an image is worth the extra time and effort. Severely mutilated images can be resurrected, but the work is painstaking and detailed, involving the selection tool, multiple blends or color replacements, and pixel-based editing. From time to time, historians also want to put facsimiles of text sources on the Web. These are among the most difficult images to work with, and a good result ultimately depends on the condition of the original and the quality of the scan. Just so you know what you might be getting into.