Scholarship on the Web: Editing Engravings–Matting Elements

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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 *Elements*. *Elements* is available at an academic discount. and is particularly good for academic projects because of its attractive price point and the versatility of the program. *Elements* is capable of some very sophisticated image editing. 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 Elements: Engravings

The "blending" technique employed in Adobe *Photoshop* cannot be used in *Elements*, but there is a way to replace color. Like most software applications, Adobe *Elements* 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.

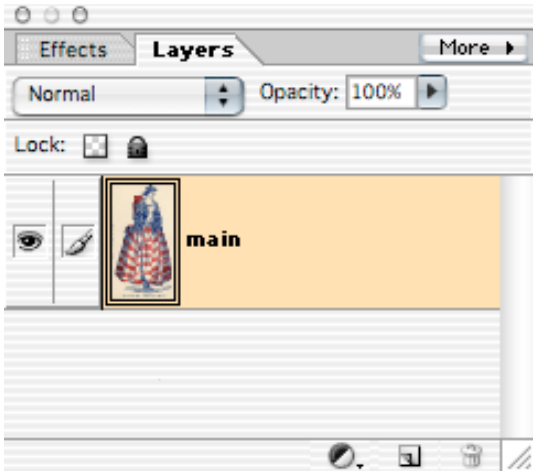
Our first task is to crop the image and correct the color. But before tackling the image, be sure that the Layer (Choose Window > Layers) and History (Choose Window > History) palettes open and accessible and that your tools are handy. At this juncture, it's also advisable to tend to housekeeping: create 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 Enhance > Auto Color Correction.
6. Select Enhance > Auto Contrast.
7. Select Enhance > 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.

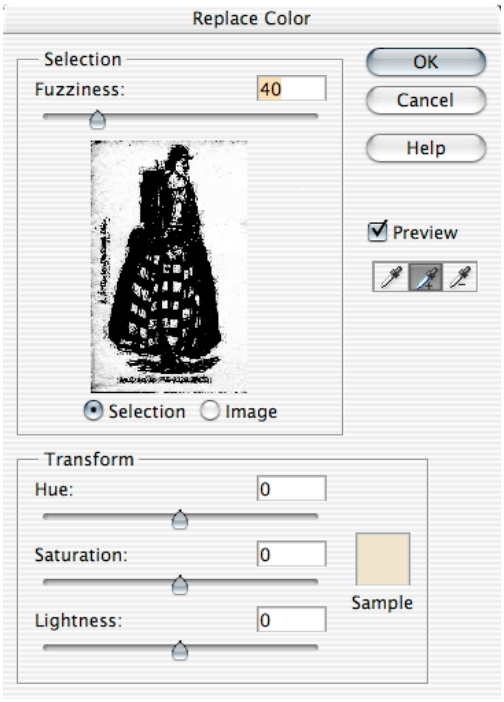


1. Double-click the name of the "Background" layer.

2. Type "main" in the dialogue box.

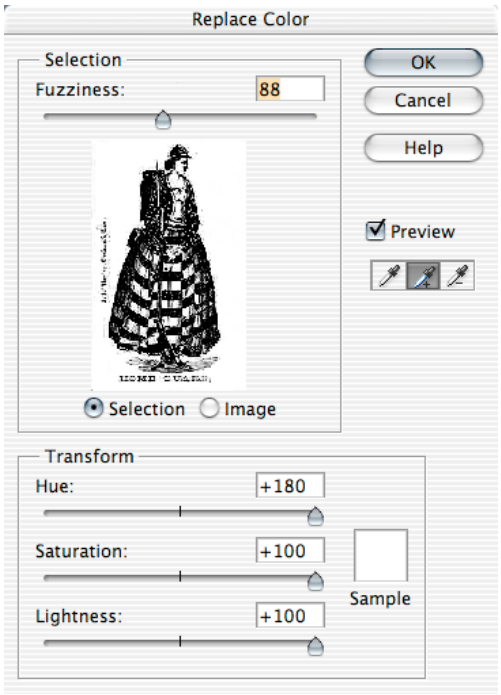
3. Click OK.

We're ready to the major work on the image. It's good to remember at this juncture that replacing color is not an exact science. Experimentation is necessary to achieve the best results, and each image requires its own treatment. Practice also helps.



1. Click on the "Main" layer.
2. Choose Enhance > Adjust Color > Replace Color
3. Set the Fuzziness slider to 40.
4. Click on the background of the image.
5. Drag the Hue, Saturation, and Lightness to the far right.

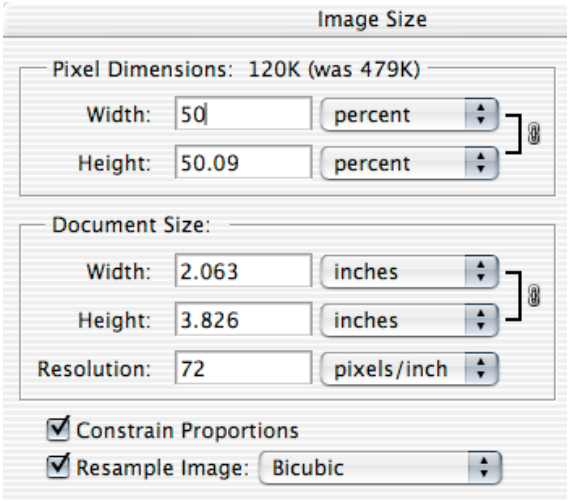
Both the background of the dialogue box image and the background of the main image should turn white.



6. Use the Add to Sample button to add an additional color. (Usually clicking on a darker color produces the best result.)
7. Move the Fuzziness slider to the right to add to the range of the color selection.

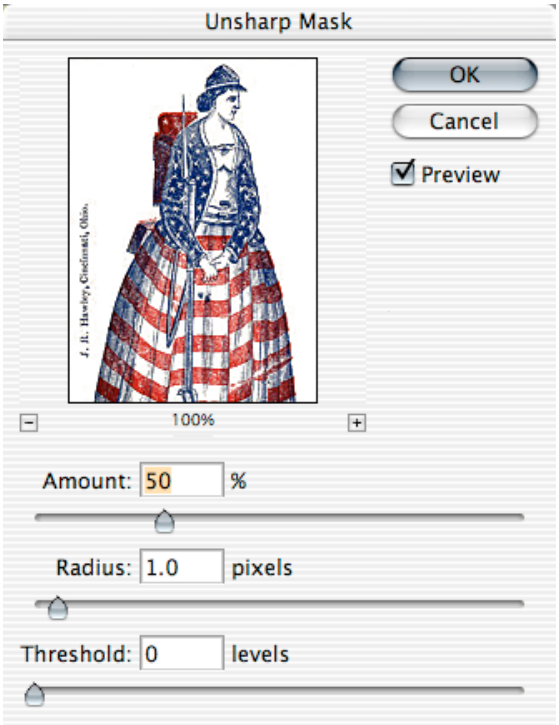
By adjusting the Hue, Saturation, and Lightness sliders, you can change the background color to one of your choosing or match a background color. (For example, a setting of 20, 100, 60 yields a light yellow background.) You may also need to use the Magnify and Paint Brush or Eraser tools to touch up the image, especially around the text boundary of the image.

Time to resize the image. Note the dimensions and resolution of the image; it has been scanned at a very high resolution—far too high for a web image.



1. Choose Image > Resize > Image Size.
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.

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.



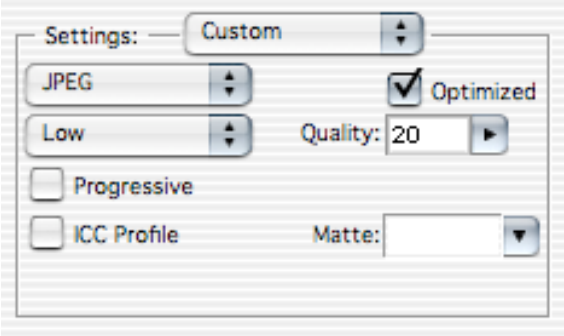
1. Choose Filter > Unsharp Mask.
2. Set the sliders to the following settings:

   Amount=50%
   Radius=1
   Threshold=0

3. Click OK

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.