Photographing and Photoshopping Transparent and Reflective Objects

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I'm Bruce Philpott and I'm the Graphic Designer and Photographer for the Terlato Wine Group. I do all of the graphics for the four family wineries except the bottle labels and any national ads

Our wineries have award-winniing wines and there are people waiting at our phones to take orders and customers can order online... but someone has to tell the public about these wines in an enticing manner, and that's my job.

I spend less than ten percent of my time at work taking pictures. The rest of the time I'm designing and creating the collateral print material needed to sell the wine: Sell Sheets, Tasting Sheets, Rack Cards, Bed & Breakfast Cards, Postcards, etc., etc.

More important are the special mailers I create to sell specific, limited release wines. These special mailers generate a lot of income, so I put a great deal of work into them.

Each of the wineries also has at least one wine club and each club sends a newsletter with each club shipment. I design and produce these newsletters.

I also do email blasts to promote our wines, wine clubs and our special events.

Print graphics

Notice how many pictures of wine bottles are in these examples of what I produce!

In the time we have this evening, I won't be able to teach everyone all of the aspects of Photoshop that I use, but I hope to show you what I do and the basics of how I do it. You can learn all of the specifics in the great Photoshop classes taught here at Santa Rosa Junior College. You can also go to the tutorials on my web site which cover most of what you'll see this evening.

The images we're going to create tonight won't be perfect. Time is money. I can't take a week

at work to create an image. What I'll do is make an image which is believable... which doesn't shout out FAKE to the viewer. I'm not trying to create an undetectable counterfeit... just a very plausible image.

First, I'll briefly cover how I create the photo of my transparent/reflective subject. Then I'll show you how I remove the reflections and the background.

Available light in the office gives me a reflected image of the office in the bottle and doesn't light the bottle or label well.

On-camera flash just reflects back at the camera from the bottle.

I liked the results I got using open shade outdoors, but the company didn't like the effect. They wanted my bottle shots to look like those in *Wine Spectator* and other wine magazines.

I tried a light tent, but couldn't get very far from the bottles. I like to use a telephoto lens in bottle shots, to minimize any perspective distortion.

The bottle studio

At Rutherford Hill Winery, we remodeled an office to be used as the winemakers' conference room. As soon as I walked past the remodelled white room, I asked the winemaker permission to use it for my bottle photography

The reason I like this room is that I can point a couple of lights up at the walls and ceiling, and those huge surfaces become my soft light sources. Since

White conference room

the whole room is white and there's nothing on the walls, there's very little to create a distracting reflection in the bottle.

Here's an un-retouched shot of a bottle I photographed in that room. Isn't that light great? Simple, too... I keep a couple of small light stands in the room and only have to bring my camera, two lights and the wines.

For the sake of uniformity (so I can combine today's bottle shot with one I did last year and they'll look the same), I shoot with a mild telephoto lens straight on at the bottle(s). A wider lens would distort the bottle and the label. Yes, sometimes I take more interesting angles, but I take a straight-on shot of every bottle, no matter what other angles I might use.

Bottle as photographed in the white room

I shoot in Camera Raw. That enables me to make global color and exposure adjustments as I begin. Since I'm using electronic flash lighting, there's not ever much color correcting to do, and we don't care about blowing these specular highlights, so let's crop it (mainly to straighten the bottle) and open it in Photoshop.

Processing in Photoshop

I've learned to never permanently change pixels. You'll see that I use Adjustment Layers and layer masks to modify the image. The original

pixels are still there if I realize I've made a mistake or if my boss or someone wants a different effect in the photo.

Every image created with a digital camera requires some sharpening. A lot of you might have your cameras set to sharpen that little bit, but I have more control and get better results if I skip shapening in the camera and do it in Photoshop. Let's duplicate this layer (command/control-j) and use an Unsharp Mask to do some priliminary sharpening to the image. Final sharpening, just a tiny bit more, will be done each time I output for a specific use.

Since I sharpen every image twice, I don't really go through what you saw me do to sharpen. I've defined a key that simply opens the USM dialog box. This saves me a surprising amount of time and repetitive motions. I'll just press f4 here, and we can sharpen the image just to the point where there are no halos.

Now I'll put a layer mask on our active layer by clicking the circle within square Mask icon at the bottom of the Layers Panel, and I'll turn off the Background layer.
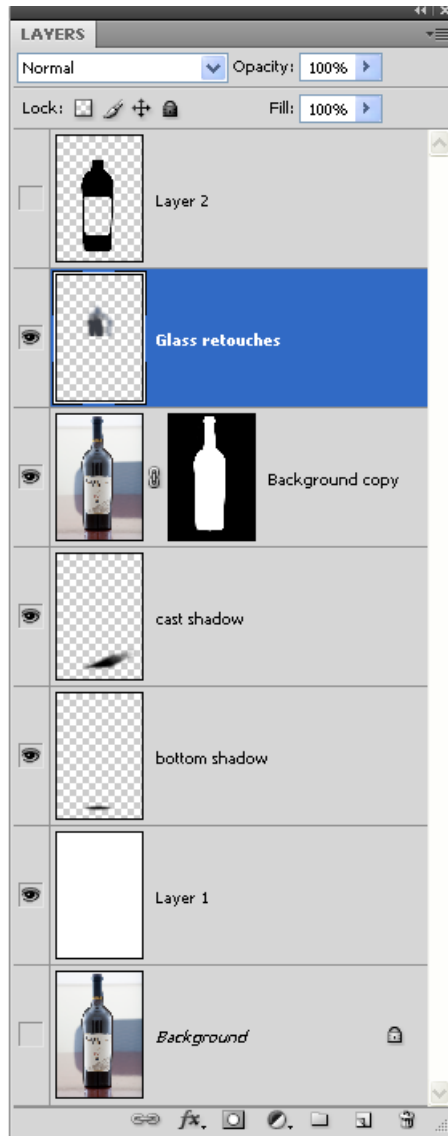
Wherever I paint black on this mask, that portion of the layer will seem to disappear, revealing whatever's below it. If I make a mistake, I can paint white on that black area and show what was previously hidden. (See my Masking Tutorial.)

It's kind of hard to see what I've removed here, so I make a blank layer underneath (holding command/control and option/alt while I click the New Layer icon) and fill it with a color that's nowhere in the image I'm working on.

So with each of these bottle shots I do, I duplicate the layer (to sharpen it), create a layer mask and make a new layer filled with a color that's not in my image... every time I work on a bottle shot. Does anyone have a suggestion of how I could speed this up, since I do it so often?

Photoshop actions

Right! I can create an Action, which is what I did. When I bring my straightened image into Photoshop, I press a function key I've assigned to the action, and it duplicates the layer (I'll sharpen it later to my taste), puts a mask on it and then gives me a temporary background layer. One keystroke.

Now another to open the USM dialog box and I'll sharpen it just short of getting halos along my high-contrast edges.

Now we're ready to remove the background.

Making selections

I'm rarely ever able to make a complex selection using just one of the selection tools. I use them all for different purposes. If I want a perfect rectangle or oval, I'll use one of the Marquee tools. I like to use the Polygon Lasso for odd shapes. If I'm selecting an object with subtle curves, such as a wine bottle, I find the Pen Tool is the best, but I'll inevitably wind up using one or more of the other selection tools to complete the selection.

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Let's use the Pen tool (p) to select this bottle. We can make a selection from the Path. (Let's save that selection for use later.) Now, with the bottle selected, I'll click on this circle-within-square icon to create a layer mask. Now the background is gone.

OK, so we've sharpened the image and removed the background, but there are still some distracting reflections here. Instead of cloning or painting directly on the image layer, though, I always create a new layer and do my retouching there. Sometimes I'll have several retouching layers... they don't cost anything and they give me a lot more control and the ability to go back later and change anything I want.

If you want to create a cast shadow behind the bottle, you can refer to my short tutorial on Cast Shadows.

That one was a simple, basic bottle shot which can be used in a lot of places simply to show what the bottle looks like... kind of like the picture on your driver's license... not very interesting, but necessary.

Select > Color Range

One of my favorite selection tools is Select > Color Range. Some people call it "the thinking person's Magic Wand"... Why's it the "thinking person's" tool? Because it's so much more powerful... because it has so many more options.

Take a look at the background behind this bottle. Fortunately, much of this background is somewhat the same color, so we can select it and fill that selection on the mask with black, and the background disappears.

I planned to use this table surface in the final image when I took the picture. If I'd planned to have the product sitting on another surface (or floating mid-air), I'd have hung

Layer mask

some white seamless paper behind and under the product, but it's usually not worth the time it takes to set it up. I even have a roll of chartruse Chromakey paper, but I've found that it's difficult to prevent that color from reflecting onto my subjects, so I rarely use it. I try to keep the shoot simple and fast.

You can see that I've removed a lot of the background with one simple Select > Color Range. Now I'll continue to subtract the background using a combination of the other selection tools, always painting or filling with black to make areas disappear and white to show them.

On my retouching layer, I'll clone and paint. With bottle reflections I feel free to actually paint, which looks awful in most other photography. So I'll clone and paint out the distracting areas of reflections. I leave in reflections of other props in the scene, because I'm working towards plausibility here. Without those reflections, the bottle would look "pasted" into the scene.

Making the scene look plausible

Let's work on an even more complex image now, so we can run into further challenges.

Although I can use this image for different purposes once I've removed the background, I always have a specific use in mind when I photograph a scene like this. I know what shape the image has to fill, for instance. In this case, I was shooting for a 8.5"x5.5" Christmas mailer cover, so I knew I wanted a narrow, vertical shot. I

With new background

first discuss the page layout with the people I'm producing it for. This prevents my later having to try to put this vertical photo into a horizontal layout, for instance.

It's far easier to composite two images if you know what the background is first. That way you know from what perspective to photograph your foreground subjects. If I have a photo looking down at a happy couple, for instance, I can't plausibly composite this image into it. I'd have to shoot this bottle scene from almost directly above it.

Instead of building sets or having someone put up their Christmas tree in early October for the sake of this cover, we just did a quick search of inexpensive stock images. How about "Christmas tree fireplace" here on SpiderPic.com? That one looks pretty nice! I'm going to blur it in the background anyway, so let's just buy the one dollar image. Let's drag it right into our bottle image and, hey, we're almost there!

There are some things which aren't working here, though. Can anyone see something that makes this image lack plausibility... that shows it's a fake?

Yes, the reflection on the table! That tree and the rest of the background would be reflected on the shiny table. Let's put the reflection on the table top. We can copy the background image and bring it above the bottle scene layer. Now let's Transform (control/command-T) our reflection.

Layer mask

Reducing the opacity will show us what we're getting. Having put the reflection on the table, we just need to hide our reflection area in the non-table parts of the image.
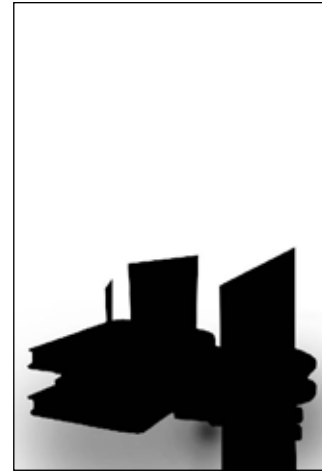
Let's put a mask on this reflection layer. Again, everywhere we paint black on the mask the reflection image is hidden. I've already made a complete mask for this, so, to save time, I'll drag it in here.

It's in the details

What else tells the viewer there's something not real about this scene?

Reflection layer mask

Yes, the tree would show through the chardonnay because it's transparent. I'll do a quick job of letting the tree show through the bottle, but in a couple of minutes, I'll show you an even better method I came up with recently.

A very easy way to do it is to copy the background layer once again, and distort it. My new method distorts more realistically, but for now, let's just Free Transform this part of our new layer. It's not the color of the wine, though, is it? We'll need to put a quick filter on it or use a Curves adjustment layer to add the straw color of the wine to the layer we're supposedly seeing through the wine.

There! We've made a cover for our Christmas mailer which will hopefully inspire people to open this particular piece of Christmas advertising when they receive it in the mail.

When I create a phony reflection of a bottle, I can't simply flip a copy of the bottle image. If there's any perspective distortion of the bottle (a bending of the label and bottle bottom), I need to warp my "reflected" image to match that perspective.

Distortions through clear bottles of fluid

Last week I took a picture of those of you who were here before we got started. We're going to put our bottle shot in front of my photo of the North Bay Adobe User Group members.

Again, we don't see the background scene through the bottle, so it looks really phony.

When a clear bottle is empty, it doesn't distort much, but when you fill it with a nearly clear fluid, it acts as a lens... actually a few different lenses, depending upon the shapes of the various parts of the bottle.

I did an experiment. I took a picture of some numbers (for the sake of simplicity) by themselves and then with a wine bottle filled with water in front of them. I copied the plain numbers image and did my best to match the distorted image. That's when I realized there were about three distortions, so I copied parts of the original background image and distorted them in various ways to match the distorted image.

Having done that, I realized that it didn't really do me much good, because I'd never remember how I distorted each of these parts. Then I thought of Smart Objects! Here are those distorted numeral layers again, but this time I've made Smart Objects of those copied areas. to mimic the distorted numerals and THEN I distorted them. I had to use three different layers of Smart Objects because I could see three different distortions within the bottle.

Now let's copy parts of the NBAUG background image and paste them into those Smart Objects. The result is a very plausible distortion, just as if you were being seen through the bottle! When I change the color of the distortions and blur the background a bit, we have a very believable image.

I hope that you'll be able to use some of the things I've shown you, or at least that I gave you an idea of how to do something differently than you've been doing it before.