Chapter 2

Design Images–
Getting Started

Lots of people think they can't draw, but anyone who has played Pictionary knows that we all have the ability to make drawings that communicate to others. Today, with digital cameras and scanners available to us, we can go beyond those crude line drawings to get an image, which we then bring into Photoshop and take through the most amazing series of transformations. Suddenly we all are talented artists.

In this chapter, we will discuss ways to generate images that will then be used for woven designs. The same initial design can be modified for the specifications of shaded satins or double cloth or lampas. We aren't going to limit ourselves here by those constraints, which will be covered in later chapters. Instead, we are going to focus on generating lots of images. We find that one idea leads to another, and, in the mysterious way of creativity, possibilities grow organically from the process of doing. We encourage you to keep the judging mind quiet. In fact, exile all voices of criticism for now, and just get busy.

Digital Cameras

We love digital cameras. One of our teachers told us that the digital camera is a hand-held scanner. You no longer have to worry about the cost of film. You just go out and shoot images, then download them to your computer.

Put your digital camera to work in the collection of images for your weaving. What size camera do you need? If you will be using the entire image as the size of your weaving, consider starting with an image twice the width in pixels as your final image. For instance, if you are designing for an industrial jacquard loom in a warp tapestry structure and require an image with a width of 1528 design ends on the face of the cloth, an 8-megapixel camera with the capability of producing

2-1 Various Digital Cameras

an image 3504 pixels wide would more than suffice. You would then be able to crop down or select portions of the image, with no sacrifice of image resolution. If on the other hand the loom for which you are designing has 880 design ends for the face of the cloth in a satin weave, a three megapixel camera, which can typically produce an image 2048 pixels wide, is enough. If extremely fine resolution is not important to you, for instance if you work with simple, coarse visual elements which are combined and layered, a camera of lesser megapixel size will do very well.

As of this writing, digital cameras commonly download images to the computer directly via USB cables, or indirectly via memory cards or chips, which must then be inserted into card readers connected to the computer. A 3-megapixel digital camera may be purchased for under $200. We have found that a pocket-sized camera, small enough to be carried everywhere without fuss, is a jacquard designer's best friend.

The problem now is getting the right image. If you want an image of a horse, you have to go find a horse. But that is the fun part, isn't it? Start carrying your digital camera with you everywhere. Photograph that crack in the road that intrigues you; or the blooming cactus; or rain on your windshield. You will be able to abstract parts of images or use the whole picture. In this book, we have often used one of Alice's images of a frangipani blossom. Here is the original digital image:

2-2 Digital Image of Frangipani Flower by Alice Schlein

Flat-Bed Scanners

Flat bed scanners are relatively cheap these days–a scanner which connects to your computer via a USB or Firewire cable and scans in full color with resolutions of 2400 dpi and above can be purchased for under $100.

Any artwork done in traditional media, such as drawing or painting, can be scanned on a flatbed scanner and brought into Photoshop, as long as it will fit on the scanner bed. For larger artwork you have to scan the image in sections, and then piece them together in the computer. (This might be a case where using your digital camera to capture the image will give you the whole page at once.) Choose full color as the output type, even if you will be reducing to grayscale later, to retain more options. For resolution, we like to choose a number that is about twice the desired number of pixels in the width of our file, to allow room for cropping, resizing, rotating, etc. For instance, if we are scanning artwork for a TC-1 set up at 880 warp ends, we would scan a 6" wide image at 300 dpi, making our image 1800 pixels wide, a little more than twice the width ultimately needed. Scans done at much greater than the resolution needed produce huge files and waste storage space; they are slow to load and work on. Still, you want a file that is larger than the outcome, not smaller, so you don't have to make up information.

Many scanners allow you to scan the artwork directly into the Photoshop application; if your scanner doesn't have this capability, save the scan as a .tif file on your desktop and open it in Photoshop.

Try Scanning Real Objects

Three-dimensional objects may also be scanned. We have used leaves, pebbles, jewelry, textiles such as knitted, crocheted, or embroidered objects, baskets, jewelry, and even foodstuffs. Even if the scanner cover won't close all the way, the scan will work; sometimes it is necessary to cover the object with a dark cloth to keep daylight from leaking in the sides. Slices of fruits and vegetables make wonderful design elements when scanned; protect the scanner bed with plastic wrap before scanning, and cover the object with a dark cloth. Crumpled paper or aluminum foil are worth scanning for background textures, as well as string bags used to store oranges or onions.. A tour of your kitchen or laundry room will give you plenty of raw material for scanning.
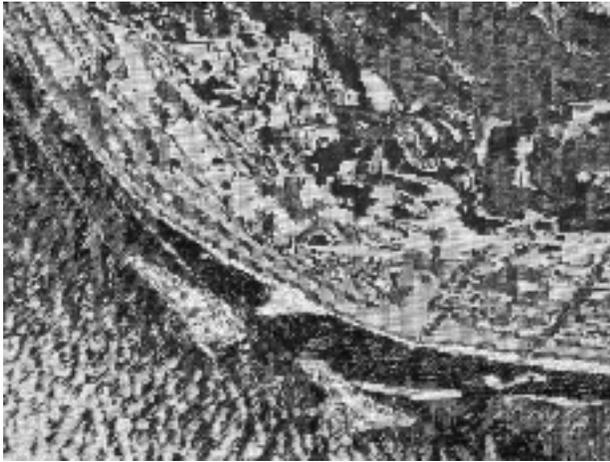

2-3 A flatbed scanner

Scanning Slides

Scanners also allow you to access all those old slides you have taken over the years. A good slide scanner, one built specifically for this job, is quite expensive because it faithfully captures the colors and resolution of the

original slide. Color correction is an issue if you are concerned with printed matter, but for the woven process, color represents structure, so you can tolerate some inaccuracy. In other words, you can use slide scans for textile design that would be rejected for printed output.

Save Your Scans

We like to set up a design folder or directory on the computer to store the results of our scanning sessions. Entire scans or sections of them may be combined with other scans or with other digital artwork in our designs; a generous collection of scans is a valuable resource for any artist.

Look for the unplanned elements and accidents in scans and accept them as "gifts." Alice used a terry towel as the background for a cabbage slice she scanned, thinking she would eventually isolate the vegetable and eliminate the towel. Once she had the image, however, the towel produced such interesting marks, that she kept it in her weaving.

2-4 Unexpected results of towel background in a scan by Alice Schlein

The Internet

The Internet is another source of imagery for digital design. Regarding copyright, a basic principal is this: **Do not copy unless you have permission or are sure it is in the public domain!** Pay attention to copyright laws and do not appropriate others' designs for your own use without obtaining permission, giving credit and paying fees when required.

The resolution of most web images (72 pixels per inch is standard) is too low for quality printed material, but will work fine for a woven image at 72 epi or less. In fact, you might find you are reducing those images further for a lower epi. This gives you access to an almost unlimited source of motifs.

Note: Be sure to get permission before using other people's images

Copyright-Free Designs, Stock Images and Clip Art

Copyright-free designs, such as those sold by Dover with a CD collection of the designs accompanying a book, are useful for certain images; you may use them without special permission in your own work as long as you include no more than ten in the same publication or project. Contact the publisher for further permission if you are producing work for resale. The same rules apply to use of clip-art and stock photographs.

Use of Other Programs
To Generate Original Art

If you work with Adobe Illustrator®, Macromedia Freehand®, or other drawing programs, you may generate vector graphics which may be imported into Adobe Photoshop®. Another source of original imagery is artificial reality generators, such as Bryce®, used to produce imaginary landscapes which may be imported into Photoshop. Pattern generating programs, fractal design generators, web pattern generators, and other such programs are another source of interesting original raw material for incorporation into Photoshop design files. In fact, with so many potential sources of original art, whether analog or digital, you will have no trouble coming up with artwork to incorporate into your weave files without bumping up against copyright infringement issues.

Drawing Directly
In the Computer

Don't ignore the possibility of drawing directly in your computer. You can work in Photoshop, or Illustrator, or any other image making program that you have. Photoshop can open most files produced in other programs, such as .tif, .bmp, and .jpg. You can start with a blank page or you can open up a scan or digital image and start drawing on top of that. An example is shown in Project 1, Chapter 5. If you don't like using a mouse, try working with a digital tablet and pen. They come in a variety of sizes and prices, but even the smallest one is quite satisfactory. Since we have all been trained to hold a pen, the gestures of using this tool will feel more familiar than drawing with the mouse.


2-5 Using a Wacom Tablet instead of a Mouse

Using Photoshop to Compose Images

Once you have brought imagery into Photoshop, whether by scanner, digital camera, or drawing directly, there are a number of paths you can take. To help in the choice, note that your final weaving is going to be intricately tied to your original design. An image translated into cloth is going to be modified by its yarn and weave, but a poorly devised image is still going to look like a poorly devised image. At first, just the translation to cloth might be enough to make you happy, but after you have done the process for a while, you will find yourself being more critical of the initial imagery. So spend time making these compositions.

2-6a Artistic--Cutout Filter applied to 2-2
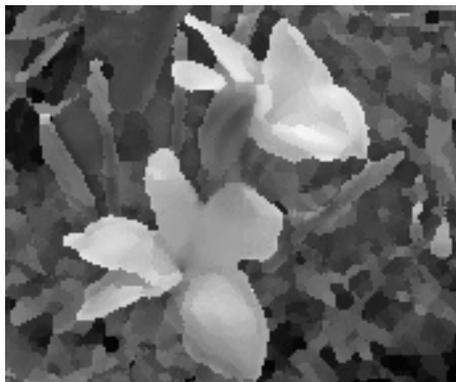
2-6b Artistic--Palette Knife Filter applied to 2-2

2-6c Sketch--Photocopy Filter applied to 2-2

Save All Versions

Photoshop allows you to save your work any time you want to. This means you can start something, save it, continue to work, save it, and then work some more. You can go back and duplicate an image, and then rework it. You can have so many versions that you make yourself crazy. At some point you will want to make the determination of which image or images to take into cloth, but first allow yourself to try all the variations and see where they lead you. Refer to Appendix F, File Nomenclature, for a suggested system of organizing your work.

Use the Full Potential of Photoshop

Working in layers is also a wonderful aspect of Photoshop. You can turn layers on or off, move them over or under each other, mask or expose sections of them. You can bring images together from scans, photos and drawings, and you can resize and transform parts or all of an image.

Filters are a book unto themselves. Here is where you can turn your image into a cubist composition, a pointillist painting, or a woodblock design. You can take one image and duplicate it a dozen times, bring each one through another filter or combination of filters (see Figures 2-6a-c), and you immediately have a series to work with. If you think you are a person who is cool and reserved, just spend some time with filters and you will find your enthusiastic side. Chapter 5 contains several examples of using filters to create variations of a single starting image.

If you need to make a repeat motif, explore the filter Offset (**Filter>Other>Offset**). It will help you make seamless boundaries where the motifs join vertically and horizontally.

We really can't say enough about the marvels of Photoshop for manipulating images, their variations and new possibilities. Again, we encourage you to take a class and buy the wonderful books that detail the depth of this software. When you have a pile of images ready, then turn to the rest of this book to find out how to transform them into weavings.