TRADITIONAL MATERIAL USE IN A DIGITAL WORLD: A CREATIVE DESIGN METHODOLOGY

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ABSTRACT:

Traditional studio curriculum tends to dominate our art and design foundation courses. So when students finally confront the computer in upper levels courses they see it as a separate medium or tool with certain limitations. But the computer can link all mediums together and become another way to invent exciting visual possibilities. Digital image making can use the same material methods and techniques as traditional materials. The marks and texture within a drawing or painting can bring richer and more accomplished quality to a digitally rendered drawing or manipulated image if these mediums are planned as part of the process. This paper will explore traditional studio creative material methods and techniques for the classroom, giving proof of how traditional art mediums hold a place in digital art processes and how traditional mediums can be enhance all forms of design through the digital realm.

KEYWORDS:

Digital Art, Digital Media, Design Education Methods, Traditional Studio Media, and Digital Hybrid Techniques.

1. INTRODUCTION:

The challenge of digital image making in the classroom suggests there is a perception that the computer and its software programs offer all the possibilities for manipulation and effects. "Many artists were first attracted to digital tools because they offered creative opportunities not possible by traditional means." (Wands, 2006) Yet, students who start working with this technology tend to be software limited and never venture outside the constraint of what the software offers as a way to make better marks, textures or unique color combinations and effects. When we compare software techniques with traditional studio techniques such as drawing in charcoal or low relief sculpture of clay, we know that there are limitations we encounter in image manipulating in the digital realm. However, the traditional studios techniques such as in painting, drawing, printmaking, and even ceramics, all have a place in digital image making and manipulation. If traditional media are introduced within digital technologies, they give way to greater possibilities of effects and surfaces to select from. Traditional techniques can strengthen the impact of an image and create an educational relationship between the digital and traditional techniques of image making.

Traditional studio curriculum tends to dominate our art and design foundation courses. So when students finally confront the computer in upper levels courses they see it as a separate medium or tool with certain limitations. But the computer can link all mediums together and become another way to invent exciting visual possibilities. Digital image making can use the same material methods and techniques as traditional materials. These traditional methods give new ways to creating digital images and illustrations. The marks and texture within a drawing or painting can bring richer and more accomplished quality to a digitally rendered drawing or manipulated image if these mediums are planned as part of the process.

2. A DIFFERENT APPROACH TO THE COMPUTER THROUGH MATERIALS

When working with the computer as an image-making tool there are certain limitations presented by the purely physical nature of creating an image. The computer is delicate and not part of the physical world of image making. We can't paint media on it or get it wet and it doesn't take too much abuse before it stops working. So it is limited as a traditional artist's tool. So how does one get around this problem? In your current world, especially in the classroom, we approach working with the computer with the physical limitations of the LCD screen or monitor, keyboard, scanner and digital camera. Computer software programs tend to sterilize the mark-making process. The airbrush tool or the brush tool in the Photoshop palette can hardly compare to the "real thing." Therefore traditional materials and mark-making processes done with

traditional media are some of the best options to gain back the quality not available through the synthetic marks of a software program.

These limitations set forth a new way of thinking about materials and how we deal with the images we make within the digital realm. The problem becomes how do we take images made in a traditional way into the computer? Collecting these traditional images becomes one of the crucial steps of working with traditional techniques. We tend to primarily use the digital camera to make or gather images. Yet, the digital camera is not always the best way to great detail and surfaces available in a traditional image. Developing a plan of what and how to collect images is key to working with the computer.

The computer and all it devices, whether they are a flat bed scanner, digital microscope, or three-dimensional scanner are all a part of the computer and can effect the images we collect and manipulate. Each type of image capturing device has the potential to create different effects within the digital palette. These devices are the first steps in coming to grips with how one creates images using the computer. Which is the best choice, what does each device do differently, and how can experimentation play a decisive role in our understanding of the computer and its image making capabilities? The computer and its devices have become a complex technological camera with capabilities to manipulate the image it captures in endless configurations.

These questions and their challenges form the basis for how can the computer become a rich source for creating image as any traditional medium. Knowing which methods and techniques help make the computer a rich a source for creating images of expression and mark making as any other artist's or designer's tool is the key to success. Creating new ways to explore traditional studio creative material methods and techniques that introduce a digital mixed exploration and showing examples of how textures in clay can create a unique effect for image making, as well as printmaking monotypes, the drawn mark, or the rich pigments of encaustic painting can be an effective way of teaching digital image making.

3. THREE CREATIVE METHODS AND TECHNIQUES

3.1 TRADITIONAL MEDIA EXPLORATION

Working with traditional media, such as drawing or painting, gives greater options or ranges when working with digital image making. They provide a rich palette of surfaces from which an artist or designer can work. The workflow is to Create many different surfaces on paper or canvas, scan or photograph these marks into digital files, and then use them for manipulation in software programs. Traditional artist materials, such as

charcoal, give a surface grain different from that of pencil marks, which tend to create an atmospheric haze and surface texture. Pencil marks work best linearly, but can also work as a tone. The graphite in pencils tends to give off a sheen when scanning or photographing which can be corrected through software program such as Adobe Photoshop. This metallic sheen can also produce beautiful effects in the surface of images. Oil pastels, oil paint, chalk pastels, encaustics, and acrylics have the potential to create dynamic color and surface exploration. Wax encaustic marks (Fig. 1) manipulated through layers in Adobe Photoshop show strong marks and color that are indicative of the encaustic medium, which is a material plentiful with saturated color and fluid mark making capabilities.

Figure 1: *Blue Dance* by Carol Faber, 2003. Encaustic Medium Digitally Manipulated in Adobe Photoshop.

Many printmaking techniques have been considered part of digital process for sometime especially those that combine Inkjet printing with traditional art materials. (Schminke, Krause, and Lhotka, 2004) Many digital procedures include printmaking techniques over traditional mediums like a watercolor wash, pastel drawing, or even photography. However, traditional processes can be reversed by scanning any traditional printmaking techniques and digitally manipulating these images together. Figure 2 is an example of an original monotype printed texture, which has been digitally scanned. Three variations of the monotype print were manipulated using Adobe Photoshop are shown in Figure 3. These examples demonstrate how the simplest of images can take on a new visual identity; yet still retain the original characteristics and quality of marks.

Figure 2: Monotype Example by Carol Faber, 2004. Direct Scan on original medium.
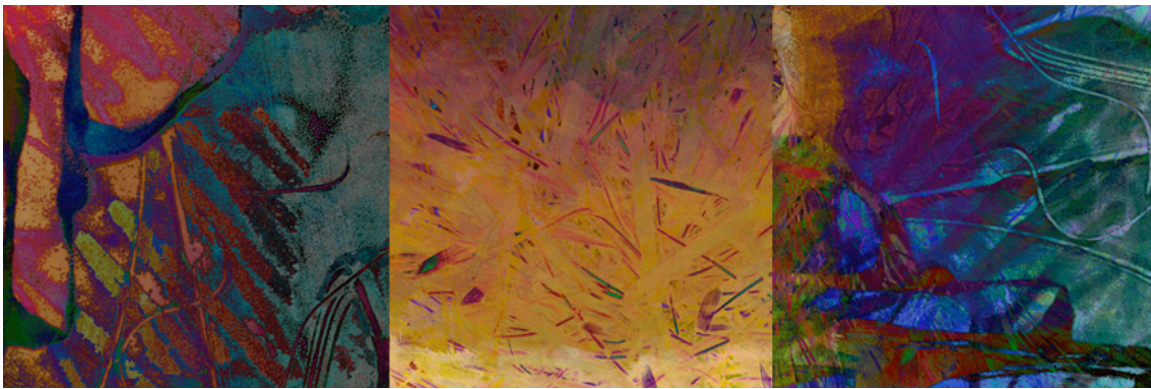

Figure 3: *Untitled 2* by Carol Faber, 2005. Digitally manipulated Monotype print in Adobe Photoshop.

Three-dimensional low relief surfaces such as wood carving, fabric surfaces, and clay can create effects as rich as two-dimensional surfaces in the digital world. Wet clay photographed with a digital camera and manipulated in layers with other marks created in clay (Fig. 4) shows the potential of what three-dimensional media can offer. The original clay was a gray base, so color transparent layers were added with blending modes in layers with Adobe Photoshop to create the color results in this final clay digital surface.
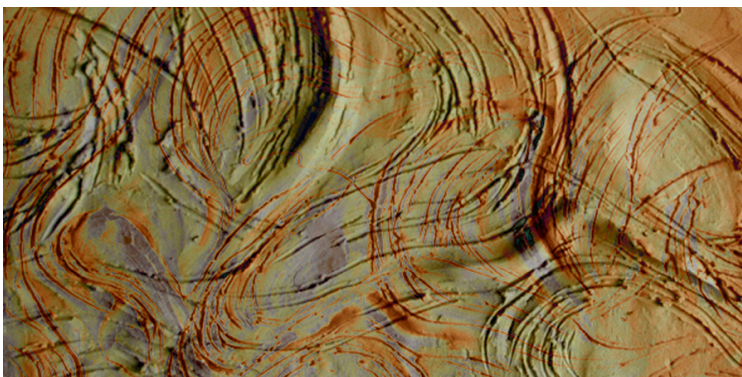

Figure 4: *Clay Drawing 1* by Carol Faber, 2007. Digitally manipulated in Adobe Photoshop.

Traditional media exploration becomes a wonderful experimentation process for students in any classroom because it forces them to think about how art materials might be translated into the digital realm. Not everything works on the first try or sometimes does not produce the effects that one might expect within a software program. Sometimes marks do not have enough contrast or sometimes they have too much color or contrast. It is a trial and error process. Most traditional materials work best when they are planned ahead and scanned using a flatbed scanner. Some traditional materials such as wet clay are better photographed. Whichever medium is explored, traditional media can significantly expand the capabilities available within digital imagery.

3.2 SURFACE AND TEXTURAL EXPERIMENTATION: FOUND MARKS, OBJECTS, AND MATERIALS

Found marks, objects, and materials are some of the best and most remarkable surfaces to work with using the computer. Rather than spending the time making something from a traditional media, such as using a pencil to create a hand rendered surface, photographing found textures can give an instant textural effect that would take hours to render by hand. Searching for found marks, objects, or materials to create digital drawing effects is an effective way to experiment with digital texture the same way an artist creates drawn textures through seeing. Combining found marks using a digital camera or scanner with created traditional marks adds new dimension to the digital process thus enriching the digitally-manipulated marks and images.

The best approach for digital image making is to photograph or scan a number of different surfaces from both natural and manmade objects to create a number of examples to pull from when working through the computer. A surface such as stone, in this case a crystallized center from a geo (Fig. 5), gives the greatest amount of texture through scanning the object. This surface texture and detail is intensified when the image is manipulated through multiple layering. This immense depth would not be possible without a high-resolution image capture device and the close up detail made possible through scanning (Fig. 6).
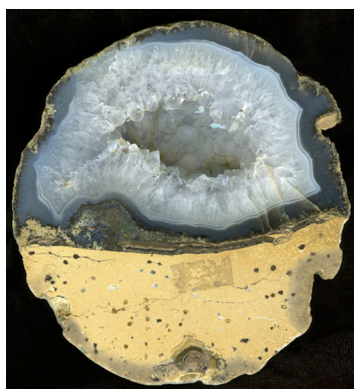

Figure 5: Original Scan of Geo by Carol Faber, 2006.

Figure 6: *Surface 1* by Carol Faber, 2006. Digitally manipulated rock surface.

Selecting natural objects with texture and detail (Fig. 7) gives a vast range of colors, interesting shapes, and distinctive textural relationships that can offer numerous ways to experiment with surface detail, pattern, and the revelation of something innovative from the familiar. This example of natural objects digitally manipulated has strong surface textures and detail of line through the veins of leaves, which mimic linear characteristics of the drawn mark. (Fig. 8) Such a visual source becomes a textural reference in the same way that one might use still-life objects to observe and draw from, or materials to collect. In the same way as a traditional media process, this gives another avenue for texture and surface exploration.

Figure 7: Original objects used in digital manipulation as a still life in Figure 8 and 9.

Figure 8: *Nature 2* by Carol Faber, 2005. Digitally manipulated natural objects.

3.3 DIGITAL EXPERIMENTATION AND MANIPULATION USING TRADITIONAL METHODS

Working with traditional media exploration and the collection of found surface textures provides a new dialogue for digital exploration between the traditional art materials, photographic images, and scanned surfaces. This creates greater potential for digital experimentation and manipulation using traditional methods. These digital examples become objects, still life imagery, textural renderings, and visual samples to draw endless connections back to the physical relationship of our traditional media beginnings. The drawn marks, in this example (Fig. 9) provide a connective relationship back to the strong visual surfaces that were captured and digitally manipulated. Digital colors and surfaces can evoke moods and emotions just as any visual image can in the traditional sense.
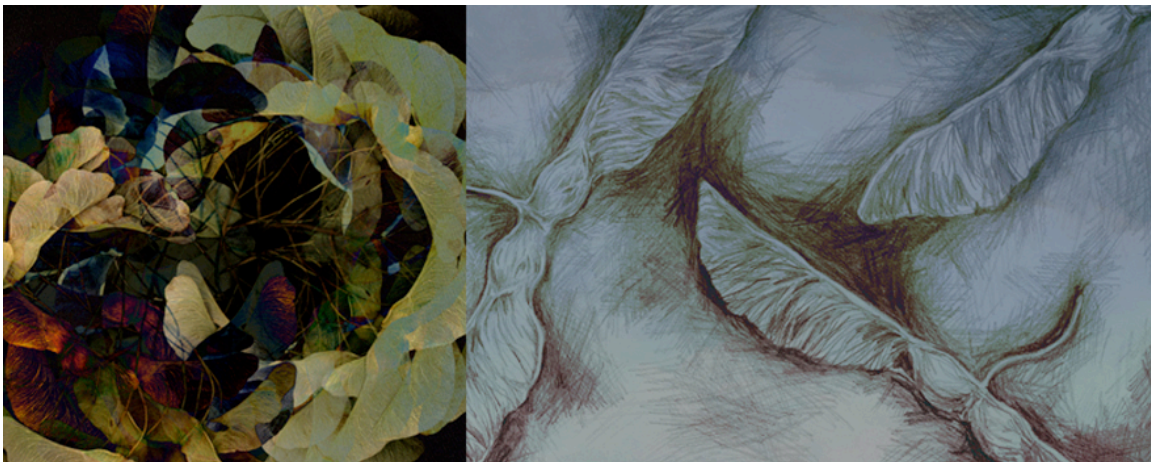

Figure 9: *Landscape 1* by Carol Faber, 2006. Mixed media combining drawing digitally manipulated objects

Expressive marks and colors enhance the digital process. This image (Fig. 10) combines both traditional drawing materials with experimental mark making using the encaustics medium, and a natural object, in this case horse hair, through the digital layering of transparent colors developed through Adobe Photoshop. Objects and traditional media are successfully integrated and overlapped thus creating a synthesis of surfaces, found objects, textures, and marks. This process is similar to the traditional artistic methods of image making, yet adapts technology within the physical world of making things. The possibilities are endless in combining textures over other photographed textures, drawings, paintings, or even sewn fabrics where the thread becomes a line that also connects to a drawn mark. The process becomes the concept and it can also inspire the imagery.

Figure 10: *Remaining Light* by Carol Faber, 2003. Combining of Encaustic Media and horsehair digitally.

The last set of visual examples were inspired through imagery of the microscopic world. The first image (Fig. 11) uses a microscopic cross-section of a water lily leaf as a starting point. This image was in black and white and had to be color manipulated and related visually to the rest of the imagery. Scanning a block of ice using the back lighting feature on a digital scanner created the surface quality within the piece. This helped to create the atmospheric details and soft effects in color. Natural organic leaf forms were collected to related back to the microscopic imagery. Twenty-seven layers exist throughout the image, bringing together the concept and imagery by combining surfaces and photography. The final image uses the same subject of the microscopic structures of water lilies showing detailed connective starch tissues that resemble starfish-like shapes invoking the theme of the sea. Seashells and color texture were manipulated to create the oxidative qualities of water rusting over time. Texture plays a critical role in creating the illusion of a watery surface pooling around the collected objects, thus giving this digital image rich color and texture equal to the surfaces of a painting (Fig. 12).

Figure 11: *Leaves* by Carol Faber, 2006. Image created from natural objects and microscopic images.
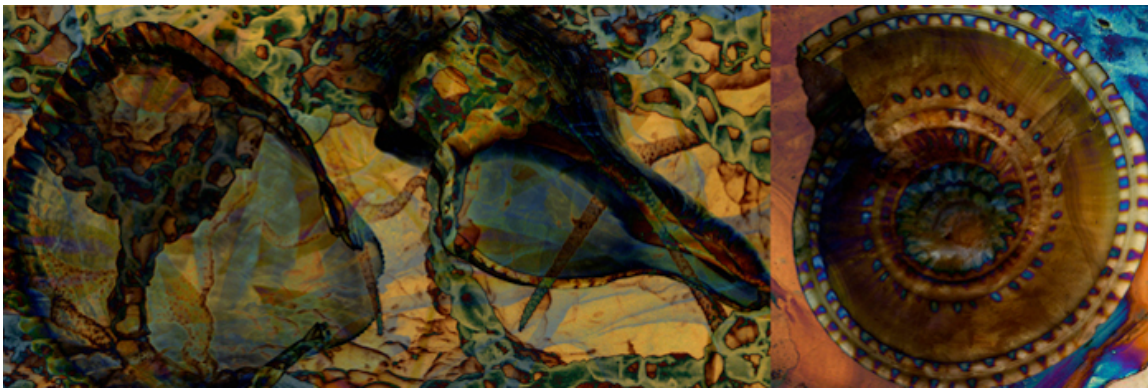

Figure 12: *Sea* by Carol Faber, 2006. Image created from natural objects and microscopic images.

4. CONCLUSION

The methods addressed could be used in various ways for any course of study in visual art and design. Specific parts from each area could be developed for a traditional art studio course to expand digital techniques and add a new dimension for learning and exploration. Digitally manipulated imagery can have an impact on many design fields. They can be used to provide more interesting value, texture, and color to designed images. These techniques and examples provide proof of how traditional art mediums hold a place in digital art processes and how traditional mediums can be enhance all forms of design through the digital realm.

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