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ABSTRACT

This project discusses my exploration into depth and space using three-dimensional elements within a two-dimensional surface. Individually drawing different elements from sculptures I have previously created and then scanning them into the computer allows me to create the illusion of three-dimensional space. Through this process I am able to explore the relationship between different elements that lead to a false perception of depth. I am able to work organically with these relatively flat, singular object drawings and though I will present finished works, the focus of my thesis is the processes used.

My first process included drawing separate, individual sketches of the sculptural elements of (1) architectural structure, (2) bendable wood, and (3) shadow boxes. By scanning several variations into the computer I was able to layer each element to create a false three-dimensional space. Two series were created, first using architectural sculpture with bendable wood, and the second with shadow boxes and bendable wood. I limited myself to two elements in order to investigate complexity versus simplicity within the pieces. Moreover, I was able to compare the original scanned drawing in relation to its computerized inverse all within a monochromatic scale. The second process involved taking these pieces, placing them individually into one document in a grid format, and then physically drawing on them. Then, I continued to work organically on top of these pieces by assembling a collage of parts from previous digital prints. Working organically to create illusionary space is quite different from the digital realm and I have been confronted with different questions and areas of exploration. My current process involves small scaled digital prints from the first process, photocopying the prints, and then rescanning the photocopied images. They are then placed together from dark to light, or vice versa, into a filmstrip format. Using eight to ten of these filmstrips together, a broader understanding and relationship is developed from lights to darks in addition to the interactions between each piece.

Using three simple combined elements, (1) architectural structure, (2) bendable wood, and (3) shadow boxes, to create different types of illusionary space inspires me to explore their relationship to each other within the digital and organic realms. Questions that arose during these various processes have raised inquiries into the relationship of depth, space, optical illusion, and its creation on a two-dimensional surface. As an artist, the work that I have previously done for other classes and the lessons each piece has taught me are now coming full circle. Even though it may be similar ideas or processes it is still changing and growing along with me in this road of exploration; the presence of my artistic past is inspiring my artistic future.

FLATTENED ARCHITECTURE

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I have combined the processes of drawing, scanning, photocopying, digital manipulation, and physical mark making to produce the work within my thesis, *Flattened Architecture*. The propelling factors of these processes are layering, flexibility, and intuition thinking. My areas of interest started with sculpture and printmaking but soon turned into the melding of digital and physical mark-making to create illusionary space. The task of each finished print is to puzzle the viewer by making the order of the layers indistinguishable. As I discovered new processes to manipulate the mediums of digital and physical art-making, new questions surfaced that guided me to the next process. As I used different methods of digital and physical manipulation, the knowledge I had acquired from both printmaking and sculpture blended together to create a fluidity of thinking between each series of work.

A 2006 project from Sculpture I began my interest in working this way. Professor Joe Smith assigned the task of creating a wooden sculpture using five different joints and methods (i.e. glue, nails, screws, etc). This deceptively simple assignment required a detailed planning process for order and sequence of assembly. My *Miniature Playgrounds* started with an architectural structure, or scaffolding, around which was wrapped bendable wood. Pieces of ribbon that are equidistant on bendable wood created a ribbed geometrical cone (see Figures 1 & 2). These elements combined to generate a harmonious ebb and flow of negative and positive space between the bendable wood and architectural structure.

Knowledge of the special interactions on a three-dimensional level assisted with constructing elements on a two-dimensional surface.

The following year I began Printmaking I, where I discovered the beginning process of my thesis. I started with a rudimentary drawing of an object, then I layered it with a drawing of the shapes created by the objects, and photocopied them together; one could create multiple versions using the two drawings but still keeping the originals separate (see Figure 3). The opportunities for flexibility and chance came into play within my work. By using the photocopier the outcome of the final product was a mystery. The layering of the two drawings combined with the variations of value from the photocopier proposed new questions. As they were answered, more questions arose, and with every answer came a better understanding of future artistic possibilities.

When I created small pieces with the photocopier, there was a struggle between my intuition and my training in the fine arts. Academic questions pertaining to value, shape, layout, and balance were a sufficient guide, but my intuition presented the opportunity for interesting ideas to surface. With so many options for creating new and intriguing layers, my compositions became more complex, and more questions arose pertaining to design principles such as balance, symmetry, tension, unity, and movement.

More recently, in an Advanced Studio course, I created a sculpture of shadow boxes with pieces of bendable wood weaving throughout the space around them (see Figure 4). This project developed from a set of woodcuts I had done

previously in Printmaking, using the photocopier process. The sculpture stressed a tension between the rigidity of the square wood block and the textured markings that composed the image. Similarly to the *Miniature Playgrounds* series, the shadow boxes raised many questions primarily dealing with size, proportion, positioning, emphasis, and movement.

Two artists specifically influenced and inspired the work of my thesis: Santiago Calatrava and Jasper Johns. Calatrava is known for the movement and delicacy of his architectural structures within an intricately balanced linear space. The most influential aspect of Calatrava's work is his process of fluidly combining drawing, design, sculpture, and architecture. Using different mediums was vital to me because I moved between sculpture, printmaking, and digital art with my different processes. Jasper Johns' prints were a particular inspiration. In the piece entitled *0 through 9*, Johns created illusionary space through layering; by purposefully drawing each number on top of the other, he forces the viewer to search out each number, some of which may come forward in space. My interest in manipulating the viewer's attention to depth and space was the starting point for my first series of work.

My thesis was guided by understanding the composition of elements using my printmaking process. I limited the number of elements to (1) architectural structure and (2) bendable wood with spokes of ribbon because I did not want the finished products to be overwhelmingly complicated or muddled. By limiting the number of elements I could better understand their relationship to each other;

likewise I was able to understand the digital tools to effectively create illusionary space. Moreover, variations of each element were drawn to capture the different positions that these elements are put into when in sculptural form.

The process included drawing those elements individually, scanning them into the computer, and layering them in Adobe Photoshop. Using a computer program allowed me to manipulate these otherwise flat individual drawings. While decisions were based on fundamental principles of balance, space and depth, movement, and tension, they were also made intuitively and by chance with the flexibility of the computer. Even though the photocopier allows for chance, based on its functional settings, tonal quality, and amount of ink within the device, it does have its limitations. Digital tools, on the other hand, allow for more controlled chance; the computer allows for layout, texture, and shape treatment, in addition to value quality transformation. Adobe Photoshop allowed for a quicker production rate and movement through artistic thoughts and questions; when decisions are being made so swiftly, they are accomplished primarily instinctively. The opportunity to question decisions while constructing these prints would have helped to solve some design deficiencies such as an overload of details, complexity, and cluttered areas. In addition, the connections between the elements are not precisely made, leaving some of them crowding, or overflowing, into the area of another element.

While there is room for improvement within these first three pieces of work, I have accomplished my goal of illusionary space (see Figures 5-7). The artistic

handling of these elements has created the venue of delicate space. Variations in value and placement of the elements also allow for the viewer's eye to question how and at what level the elements are interacting.

For my next series, I limited myself to the two specific elements of (1) a shadow box and (2) bendable wood. To give myself enough variety I drew three versions of each element, scanned them onto the computer, and manipulated them with digital tools. Again I strived to create illusionary space and, using the basic design principles of balance and cohesion, I compiled these drawings together only to find more questions within a completely new dialog of elements.

The drawing variations of the shadow boxes were crucial to understanding the relationship between them and the bendable wood. There was a front view of the box (see Figure 8), a side view with one point perspective (see Figure 9), and a bottom view with one point perspective (see Figure 10). These three drawings of the shadow box allowed for a better understanding between different drawn positions and how the bendable wood moves throughout box's space. But how many shadow boxes or pieces of bendable wood create illusionary space?

The construction of these pieces was quite different then the previous two series because of the constricting 90-degree corners of the shadow boxes contrasted with the curvaceous quality of the bendable wood. An unexpected tension was discovered that opened an area of exploration and several different questions for me. How could the free flowing movement of the bendable wood

entangle these sturdy corners? What would happen to the shadow boxes when incorporated with the bendable wood?

The three prints created out of these elements answered most, but not all, of my questions (see Figures 11-13). The tension created between the elements forced me to manipulate them even more with the digital tools within Photoshop in order to integrate them. Some pieces of bendable wood were erased or stretched to create a difference in value relating to depth. However, when using this manipulation technique it was easy to get carried away with forcing the pieces together. Furthermore, extensive layering of these elements was important for the purpose of integrating and creating cohesion throughout the final print.

While the prints using the shadow boxes do create illusionary space, it is different than the space achieved by the first series. The preconceived notion of ease with the first two elements was forced upon the shadow boxes and bendable wood, creating muddled and complicated areas. This dampens the overall illusionary space within the piece. Moreover, the stiffness of the shadow boxes is overcompensated by too many pieces of bendable wood. While bendable wood is a material that can easily be manipulated physically, there is a struggle to push the elements, which limits the depth of the pieces. However, the effort of cohesion between the shadow boxes and bendable wood creates a tension that intrigues the viewer to explore its space.

The lessons from the previous two series lead to me to explore the interaction between all the elements of (1) architectural structure, (2) bendable wood with

spokes of ribbon, (3) shadow boxes, and (4) bendable wood. By having all of these elements combined into one print, the piece easily became muddled or too busy, therefore negating my aspirations of illusionary space. Rather than going on pure instinct with these pieces, I slowed my thought processes and focused on how each element and its placement complemented each other, adding to an overall cohesion within the piece.

The first print simply uses all of the elements in a jumbled attempt to create space (see Figure 14). However, the piece has too many areas of complication rather than simplicity. In the last two pieces of the series, I started to use the shadow boxes literally as boxes into which I placed the elements of bendable wood and architectural structure (see Figures 15 & 16). I explored how these elements can be viewed differently by inverting them (from white to black), and how that inversion interacts with the other elements. The dialog between inverted and non-inverted elements contradicts the usual rule that light objects are farther away in space while dark ones are closer. Here the inverted elements appeared to be closer in space. In addition, small dialogs occur between elements while a larger dialog commences between each shadow box group of elements.

The compartmentalizing of the elements is extremely effective to create a sense of simplicity and cohesion throughout the pieces. By separating different interactions between the elements, the viewer is given several options of different scenarios depicting illusionary space. This creates movement throughout the

piece, in addition to the spatial depth. While the other pieces from the first two series have surface movement, these prints emphasize it.

After working with these three series, I moved from using digital tools to manipulate this series through a new physical process. Andy Warhol's interest in repetition with his silkscreen prints led me to explore digital repetition underneath a hand-drawn surface. I chose one print from my second series containing shadow boxes and reproduced it a certain number of times, drew on it, cut up a larger scaled version of the same print, pasted it to the surface of the current piece and then drew the same elements of shadow boxes and bendable wood on top. I repeated this process for prints reproduced four, six, and nine times (see Figures 17-19). The pieces I used to create the repeating grid were from the series of shadow boxes. The aggressive interaction between these two elements, (1) shadow boxes, and (2) bendable wood, created an even more intricate dialog between movement and illusionary space when repeated next to each other. The different pieces were repeated to emphasize the importance of the grid as the glue of the piece. The larger the number of repetitions, the more complicated the piece becomes. The complication of the piece is heightened with the addition of a large-scaled version cut and pasted on top of, followed by physical mark-making.

This series let me experiment with the balance between and melding together of the tools of the physical and digital media. Moreover, drawing on top of digital prints resulted in questions about space and depth perception. How could the two be fused together with a cohesive integration of the physical and digital media?

The three pieces of this series are completely different from other previous work. Whereas the other digitally manipulated pieces are more delicate and light, allowing the viewer's eye to move easily through its illusionary space, these new pieces force the viewer to push past the layers and separate them to see the original background containing the grid of repetition. The coarse quality of the pieces can challenge the viewer, while potentially discouraging them from exploring this different illusionary space. Furthermore, the physical mark-making is harsher, as well as more distinguishable, than the digital, and it creates a crude contrast that muddles the pieces and detracts from the concept of space and depth.

However, these three pieces were an important part in understanding how to meld physical and digital mark-making manipulation. The use of the grid was questionable as a starting point. Could the collage and physical mark-making done on top create enough illusionary space on its own? In addition, the grid did not hold the same nuances a physically repeated piece can create. Instead, the grid is the exact same image repeated and only provides the same view of space.

My interest in repetition as the background of the previous physical series propelled me into a completely new process. Rather than repeating an image digitally, I moved to a physical process using the photocopier. I took previously created prints, shrunk them down onto an 8 ½ x 11 piece of paper, and then photocopied them eight different times from dark to light. Then I scanned these photocopies onto the computer and assembled them in the vertical format of a filmstrip. I repeated this process for five prints (see Figure 20). I thought the use

of the photocopier would allow for more subtle nuances in color and depth from piece to piece. The use of different lights and darks allowed for certain parts of the print to be more visible than others. These differences allowed each photocopy to be its own unique piece.

I decided to place the photocopies in a vertical filmstrip format because I thought it was the best way to see the variations between each piece. Placing them from dark to light causes the viewer's eye to follow the different value changes and created a rhythm and pattern of movement. Bringing each filmstrip together allows subtle differences to engage in a dialog of distorting depth perception; some areas are farther forward in space while other areas are then pushed back. In a way, this causes a tension between the digital and physical mediums. While these pieces were originally drawn, then digitally printed, physically photocopied, and assembled digitally, there is a distinct relationship between the digital and physical methods.

The size of the filmstrips is also another key factor to viewing and interpreting the piece. Each filmstrip (consisting of four photocopies) is six feet tall by sixteen inches wide. When placed together the entire piece is six feet tall by thirteen feet wide. The size creates a dialog between the piece and the audience because the viewer is comparing their stature to the piece, in addition to the conversation among the filmstrips. At points the large filmstrips can become jumbled and confusing with different views of illusionary space, but it is an effective scale to look at the variations within the grey scale.

My current area of exploration pertains to understanding my thought process. Whether it is creating movies, building wooden sculptural replicas of my prints, or assembling collages using my digitally printed elements, I have slowed down my thinking and begun to analyze why I decided on the placement of different elements. I discovered that the reasons for my decisions are primarily based on the basic principles of design, i.e. value, balance, cohesion, proportion, scale, etc. However, I have also discovered my thinking process to be largely intuitive.

The videos I created were the first attempt to understand how I assembled my digital prints (see Figures 21 & 22). I captured every move of the elements and slowly understood how and why I made certain decisions. Rather than letting the viewer decide the ordering of the layers, the videos expose how the layers are pushed and pulled to create illusionary space. The process uncovered the reasoning behind each decision, but left no mystery for the viewer. However, the video allowed for the viewer to experience the process of creating each print.

I started building physical reliefs as replicas of my digital prints (see Figures 23 & 24). However, when I finally freed myself from that restriction and simply began building, the pieces fell into place. By attaching the pieces of wood at different angles and at various heights, I physically created the space and depth I achieved within my digital prints. Furthermore, I painted the reliefs with black and white paint to achieve the same monochromatic effect within my digital prints. Color choice is purely based on the principle that objects that are closer to the viewer are darker while those objects farther away are lighter. This active

decision was made to accentuate and exaggerate the depth and space of the pieces. Half way through building a relief, I switched my color treatment and painted pieces closer to the viewer white, while some piece next to the background were black. This contradicted the established system and confuses the viewer's depth perception. My thought process during constructing these images was primarily intuitive. I held every piece in a certain position while I observed its relation to other previously, or potentially, attached pieces to find a balance and harmony with the space and interaction between the wooden pieces.

The blending of digital and physical mark making guided me with my collages (see Figures 25-27). Here I grasped the importance of melding these two mediums together in a harmonious balance. Soon space is not the only illusion but also which elements belong to each medium. My process started with a common building block of a background piece. From there I cut and pasted other elements to incorporate physical mark-making into the piece. The thought process behind these collages consisted of how to successfully incorporate the physical with the digital in order to trick the viewer.

The questions my work proposed guided me into different avenues in search of answers. Those answers lead to other questions, which eventually led to my body of work. Even though some pieces may seem finished, they are simply the answer I was looking for to direct me into the next process and series. The concepts, ideas, and processes developed from this body of work have opened my mind to new areas of exploration and will continue to be a driving force in my work.

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CD-ROM Information

- | | |
|---|---|
| 1. <i>Miniature Playground I</i>
2006 Wooden Sculpture
30" x 24" x 18" | 11. <i>Prototype 7</i>
2007 Inkjet Print
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| 2. <i>Miniature Playground II</i>
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| 3. <i>Medusa Lamp Drawings</i>
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| 4. <i>Shadow Boxes</i>
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| 5. <i>Prototype 1</i>
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| 6. <i>Prototype 2</i>
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| 7. <i>Prototype 3</i>
2007 Inkjet Print
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| 8. <i>Shadow Box Drawing 1</i>
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| 10. <i>Shadow Box Drawing 3</i>
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20. *Filmstrips Series*
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21. *Movie Study I*
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22. *Movie Study II*
2008
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23. *Relief I*
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24. *Relief II*
2007 Wooden Relief
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25. *Collage I*
2008 Inkjet Print, Charcoal
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26. *Collage II*
2008 Inkjet Print, Charcoal
20" x 17"
27. *Collage III*
2008 Inkjet Print, Charcoal
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