BUILT DRAWINGS

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ABSTRACT

Digital fabrication technologies have the ability to confound ideas of control and indeterminacy. Apt to produce sterile and "perfect" forms, computer-generated constructs are finding their home within art and design communities-perhaps as mediator between concept and product. Although laser cutters are commonly employed to provide precision and controlled outcomes, I experiment with the indeterminate visual and structural potential in material layering and laser cut drawings on/in surfaces in order to better understand the potential of the tool and its tangential applications.

BUILT DRAWINGS: DESIGNING WITH CERTAIN UNCERTAINTIES

Figure 1: *Hive II, 4'x4'x1", Baltic Birch plywood, wax, gesso, paint, Ash, 2012*

Hive I (Catching Fire) and Hive 2 (Sit, Weep and Seep) are a part of a series of drawings that explore compositions that vacillate between determinate and indeterminate images and processes. My laser-cut drawings start with essential imagery and symbols such as the traditional school chair. This provides the determined framework for a composition and a fertile conceptual basis on which to build and test the effects of specific materials and tools. The laser-incised contours become substrates for subsequent surfaces that are mediated through layers of materials that include gesso, wax, paint and graphite. By embedding foreign materials and three-dimensional objects into the voids that sometimes result when parts fall away within the cut surfaces or by removing cut elements of the drawings and reinserting them at varying elevations, the notion of "building" the drawing is explored.

While assemblage as an approach to the generation of art and design is nothing new, it is this notion of technological cutting as mark-making and also its association with construction/architecture (plywood, metal, acrylic, felt) that causes me to view drawing specifically as a building-oriented activity. The tactile nature of this work operates to create drawings that allow me to literally feel the dimension in two-dimensional surfaces—and the intended potential consequence of the conflation of construction methods with image-making.

Although laser cutters are commonly employed to provide precision and controlled outcomes, my objective in this current series of drawings is to engage such tools to generate opportunities with which they are not usually associated: indeterminacy and randomness. The density of the marks and their alignments and misalignments, in combination with the erratic nature of certain materials when exposed to intense heat, result in drawings that behave in unpredictable ways. Artist Siân Bowen describes the inevitable depressions, cut surfaces, and other types of mutilations that occur through drawing processes as "creative damage" and she reminds us of the conceptual and visual richness that this type of impairment can add to the meaning of drawings (Bowen 2009). It is the ability of the laser to draw—the range of the width and depth of its marks and cuts and their inherent three-dimensionality—and the experimentation that its associated technologies contribute to fabrication processes that I explore in my work.

Figure 2: *Hive II, 4'x4'x1", Baltic Birch plywood, wax, gesso, paint, Ash, 2012 (detail)*

In addition to experimenting with the laser cutter's mark-making potential and its use to generate an unstable or unpredictable outcome, my creative work also includes experimentation with mimicking the tool's influence over a range of materials through hand-held methods. In *Hive 2 (sit, Weep and Seep),* I perform, at least in part, like a laser myself, by passing a torch flame back and forth across the gessoed surface, allowing the melting wax to wick and find areas of weakness in which to pool to create a pointillist composition of black dots that *imply* the presence of the chair images. The insertion of a small-scale hand-crafted three-dimensional chair simultaneously differentiates and mediates the transitional relationship of two- to three-dimensional qualities in the composition; a concept that is essential to the relationship between drawings and building processes.

These works are a part of my current studio practice in which I move between the languages of design, craft and art. Influenced and inspired by traditional approaches to material manipulation, I am interested in how established crafting practices and developing technologies impact art or design productions. Design disciplines embody ideas deeply rooted in the concept of communication, function, aesthetics and the human experience. Since Marcel Duchamp introduced us to art such as *The Fountain* (a urinal exhibited as a sculpture), art practice has taken refuge and found identity in the indeterminate outcome- a place where concept rules; where meaning and intent take precedence over the corporeal product. Years later, David Hockney proposed the idea that "art has to move you and design does not, (unless it's a good design for a bus)" (Thompson 2004, 07). This notion suggests that while the two creative disciplines may share essential resources and influences, the outcomes, based on determined functions and methods, are dynamically different in how they communicate. New technologies and materials have the ability to confound these ideas and I propose that computer-generated forms best find their home within art and design communities as mediators between concept and product. They provide prime venues for testing established roles for art and design, tool and material, and process and product.

My approach to the three-dimensional nature of a drawing produced through the use of a laser cutter accentuates that understanding and expressing the depth of the base material is critical. In traditional drawings, most if not all, marks reside on the supporting material's surface, but I experiment with and explore the depth of the plane- both implied and real. It is not so much the laser's ability to make its contouring cuts accurately as it is its ability to vary and control the depths of its cuts through or into the base material that makes it an interesting drawing tool. And because in the case of a material like plywood that flexes, swells and shrinks when heat is applied, controlling the depth and intensive of the laser and observing its effect on the material makes what might be thought of as an automated process highly participatory and experimental.

I commit to the idea that the relationship between drawings and three-dimensional forms must extend beyond end product comparisons into the comparative analysis of process and materials. Rethinking dimensionality can help maximize and extend expectations for what a tool like a laser cutter can do- balancing the determinate and indeterminate results that are necessary for innovative design.

Figure 3: *Hive I, 4'x4'x1", Baltic Birch plywood, beeswax, gesso, 2012*

REFERENCES

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