12-2023

Material World

Nicole Weldy
nweldy@g.clemson.edu

MATERIAL WORLD

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Fine Arts
Visual Art

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by
Nicole Weldy
December 2023

Accepted by:
Todd McDonald, Committee Chair
David Detrich
Beth Lauritis

ABSTRACT

My thesis, *Material World*, delves into the use of the crochet unit as a construction technique for building forms. Through this, I aim to organize different materials in a way that responds to the challenges posed by the physical world. My artistic process is centered around honoring the inherent qualities of thread and uses these qualities to create form, lightness, and linearity. At the same time, I remain receptive to transformative processes such as combining three-dimensional (3D) printed lines and lace stiffener to push the boundaries of what thread can do. By combining manual craftsmanship with technology materialized as a plastic filament (PLA) and epoxy resin, I can effectively expand my handwork in conversation with mechanized production.

Throughout the process of developing the work, I discovered how an individual unit, which can be seen as a simplified version of a larger form; and can be quite complex. Through this body of work, I aim to showcase the beauty and complexity achieved through simple shapes, forms, and colors. I actively demonstrate that things are not always as they seem by accentuating the materials' shadows, utilizing my hand to create variations of pure forms, and highlighting the limitations of primary color theory. This exhibition meshes 3D printing and handwork as a way of navigating the complex landscape between hand and machine.

DEDICATION

Thanks to Professor Stephen Watson for encouraging me to pursue grad school. I dedicate this thesis manuscript to my parents, Ron and Janeen Weldy, for supporting me through school. To my maternal grandmothers, Molly and Kay, for teaching me how to crochet. As well as Bryan Jehlen for being a dedicated reader through all those rounds of revision.

ACKNOWLEDGMENTS

I want to thank all the individuals and organizations who facilitated my learning environment at Clemson, including the faculty, my thesis committee, and my cohort. I also want to thank the University Lutheran Church, the Graduate Student Government, and the Clemson Art Department for supporting my research travel and workshop endeavors. Lastly, I want to thank my current and previous cohorts for positively shaping my graduate school experience, and Clemson alumni who led me to discover Clemson in the first place.

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CHAPTER ONE

INTRODUCTION

My Thesis, *Material World,* explores hand building through repeated units, mechanized printing materialized as plastic filament (PLA), and epoxy resin to create three-dimensional structures that question primary color theory, foundational shapes, and projected shadows. Through this body of work, I aim to reflect on the integration of digital fabrication as a tool for the traditional craftsman. I inherited my crochet skills and interest in handwork from my maternal grandmother, who taught me how to build fabric from individual stitches. Crocheting is about accumulating these units to create a complete form. Crochet is a popular form of lace-making, primarily due to its ability to speed up the creation of decorative domestic objects.

While my focus with *Material World* is not on women's work specifically, it is worth noting that the Pattern and Decoration Movement from the mid 1970s to early 1980s was an important precursor to my work. This movement sought to elevate craft and recognize the significance of applied arts within the art world. In this body of work, I am looking at my participation in craft production to address the tension between the mechanized and the handmade. My objective with this work is about seeing the distinction and similarities between disparate materials, plastic and thread and the potential of their collaboration to create new outcomes.

In my body of work, I combined the handmade and three-dimensional (3D) printed line to create a new vernacular. By distorting familiar shapes in various sculptures, I aimed to create something different that is hard to name and doesn't

comfortably fit into one association anymore. Throughout the exhibition, I demonstrate my ideas behind subjecting my artwork to the physical world dramatized through my display strategies as well as the shadow sometimes materializes to suggest that the smallest unit or simple shape is made up of something extremely complex.

CHAPTER 2

SHAPING FIGURES

Throughout my sculpture practice, I have explored the traditional language of primary colors, shapes, and forms. By manipulating these elements in various ways, I aimed to create something different than our expectations and offer the viewer new perspectives on these simplified conditions. I reveal a complexity of form in five flat lace works displayed suspended from the wall on an even plane. The collection of *Ariel (figure 1.1), Up-down (figure 2.1), Standing (figure 3.1), Profile (figure 4.1), and Face (figure 5.1)* recognize the mechanics of how we perceive shape. My intent is to challenge the audience's perception and associations with these familiar elements, resulting in a sense of ambiguity and complexity within the artwork.

When we go to an art museum, we experience the work by closely examining the visual information in front of us in tandem with other works in the exhibit, including the titles and material information as a guide to the artist's intentions with the work. In the 1970s, British psychologist Richard Gregory proposed that we use our existing knowledge combined with our senses to interpret new incoming information to find meaning. Gregory's Top-Down Processing Theory suggests that multiple components are interpreted collectively to identify new information's possible meanings. *Ariel (figure 1.1), Up-down (figure 2.1), Standing (figure 3.1), Profile (figure 4.1),* and *Face (figure 5.1)* are collectivity in a conversation with one another in *Installation View 2 (figure 21.1)* to examine a hybrid casting of a suggested sphere and conical pyramid repeated throughout the exhibition. *Ariel (figure 1.1)* is the ariel view that exposes *Up-down's (figure 2.1)* base

structure when displayed beside it. All perspectives of the complex lace form reveal different characteristics of the composite through line weight. Like how stitches looped over previous stitches add visual directional line weight to *Standing (figure 3.1).*

These five different works offer varying perspectives on my inquiry. I applied the unit differently to conform the shapes of the hybrid to its same scale. Each of these five pieces had separate patterns deployed to fit the same scale as the hybrid form in *Interception (figure 18.1).* But different stitches are being conveyed to fulfill the representation of a two-dimensional shape and a three-dimensional form. By creating separate construction strategies to convey the same subject I further explore the density of the unit as a building material. These works and other pieces in the exhibition further showcase how I am advancing my research based on prior knowledge. Many sister castings are repeated throughout the exhibition as seen in *Installation View 3 (figure 22.1).* This may lead viewers to believe that they can predict what comes next. But the subtle nuances introduced from piece to piece create entirely new meanings.

Adding resin to my hand constructed lace gives the handiwork the structural integrity and the benefits of 3D printing which are industrial objects that can support themselves. Throughout *Material World* resin is a bridge to understanding how PLA, 3D printed pieces perform. Resin enamel painted on the lace allows for the fabric to take up space. Lace occupies space in both *Implication Statement (figure 6.1),* a piece which interacts with the display shelf edge and *Extrusion (figure 7.1),* a piece expanding off the wall from a point as seen in its detailed documentation *Extrusion (figure 7.2).*

Implication Statement (figure 6.1), Extrusion (figure 7.1), and *Face (figure 5.1),* the separate piece installed between the two, are all examples of forms that betray the logic of fundamental shapes through their distortion. These three circles echoed from one piece to the next are anything but the three circles we would expect. In the *Implication Statement (figure 6.1),* one circle can be seen through a limb fabric half circle off the display edge and a half circle supported by resin on the display. Then, in *Extrusion (figure 7.1),* the circle goes from a perceived shape to a nine-inch form documented in *Extrusion Detail (figure 7.2),* and *Face (figure 5.1)* sustains the image of the base in the circular shape. Roy Lichtenstein, a pop artist of the 1960s, declared, "Organized perception is what art is all about." I use organized perception as a way to add another layer of complexity to my artwork. *Implication Statement's (figure 6.1)* installation also mirrors the tapering of the extruded circle from in *Extrusion Detail (figure 7.2)* as seen in *Installation View 1 (figure 20.1).* This subtle display change may spark ideas about potential ephemeral forces pulling on the display mechanisms and lace subjects. This body of work presents the recognizable and asks the viewer to reconsider the complexity of decision-making in simple forms.

CHAPTER THREE

FIRST IMPRESSIONS

Several works in the exhibition reconfiguring fundamental shapes like a square, a triangle, and a circle, which take on the physical configuration of a cube, a prism, and a sphere when they occupy space. Starting with *Outward (figure 8.1), Squared (figure 9.1), Cavity (figure 10.1),* and *Extrusion (figure 7.1),* I explore the impression of material stating its claim in physical space. These static material objects, suspended above a conventional white display shelf in *Extrusion Detailed (figure 7.2)* or on their own on the wall documented in *Outward (figure 8.1)* and *Outward Detail* in *(figure 8.2),* aim to be perceived as two-dimensional (2D) illustrations and three-dimensional (3D) sculptures. These illusions present an intimate experience for the viewer, allowing them to reflect on the history of lace-making by virtue of its scale. Artworks can be seen together in *Installation View 4 (figure 23.1).* The intricate linework provides stability and aesthetically engages the viewer on a decorative level. These pieces also model mathematical thinking, where a set of units can construct small forms or extrapolate into more extensive sculptural suggestions.

Material World draws on my crochet background and was developed through my research trips at Clemson University. While in Italy at the Gallerie dell' accademia, Venice 2022, I saw a retrospective of Anish Kapoor's Non-Object Black works and red wax installations. Reflecting on my viewing experience, it became clear to me that Anish

Kapoor and I consider reduced primary forms as important subjects. Our work intends to leave space for viewers to contemplate the forms, associations, mediums, and display mechanisms.

My work is about this dialogue between the idea of fundamental forms and the complexity of forms. In *Outward (figure 8.1), Squared (figure 9.1), Cavity (figure 10.1),* and *Extrusion (figure 7.1),* I am presenting pieces that at first glance from afar seem like recognizable shapes such as circles, squares and combinations of those. Upon closer inspection, the seemingly graphic shapes are in fact volumes constructed with detailed lace-like patterns. I make and consider the sculpture in relationship to the body to demonstrate an understanding of how lace historically operated worn by individuals or draped over human belongings. Several of the works in the exhibit elude to this relationship.

The position of the work also changes the ambiance of how much space the piece inhabits around itself. When walking by *Outward (figure 8.1) and Outward Detail (figure 8.2),* one may need to refocus their sight after suddenly being aware of their nose. *Squared (figure 9.1)* hides another square behind the depiction seen through the gallery glass wall. The whole experience is uncovered when a viewer gets a closer look at the *Squared Detail (figure 9.2)* from inside the exhibition. *Cavity (figure 10.1)* has a volumetric space easily viewed from its side, as seen in *Cavity Detail (figure 10.2).* Then, *Extrusion (figure 7.1)* to its side profile *Extrusion Detail (figure 7.2)* extends far beyond the expected area of a circle.

Extrusion (figure 7.1) was made by crochet resin casting, as evidenced by the clear enamel on the threads' surface. In order to conceal the three-dimensional nature of the sculpture from people walking by in the hallway off of Lee Gallery, it was essential to position this artwork near the moving gallery wall. I aim to offer my viewers an incentive to see the graphic reality of *Extrusion (figure 7.1)* up close and simultaneously surprise them with a multidimensional sculptural encounter that alludes to the defiance of gravitational forces in *Extrusion Detail (figure 7.2). Extrusion Detail (figure 7.2)* is installed at the eye level of the average human male and levitates above the display shelf that emphasizes the lace sculpture's ninety-degree angle. In a way *Extrusion Detail* (figure 7.2) defies how we are used to seeing artwork on a display whereas in this work the piece has emphasized what it believes to be its front. It is a simplified shape which has a volume that is articulated with complex patterns. There is a structural reason for the decorative, but the intricate patterns also result in visual movement or a suggestion of a force because of its progression.

As someone who is near-sided, I can see objects clearly within a parameter of eight to eleven inches without a prescription. After that distance, my world becomes blurry, and I can only depict colored shapes. *Outward (figure 8.1), Squared (figure 9.1), Cavity (figure 10.1),* and *Extrusion (figure 7.1)* are all combinations of actual shapes, squares, circles, triangles, and forms, like spheres and pyramids. Nevertheless, as these shapes are actualized by my hand, they become idiosyncratic and less uniform. All these four forms consider the sculptural importance of experiencing art objects in person. Artist Vik Muniz began his sculptural career by creating perspective drawings in wire. We both

playfully draw on the relationship between the flat and the physical dimension to encourage the viewer to see material transformation from a new perspective.

Cavity (figure 10.1) is a variation of *Extrusion Detail (figure 7.2)* but it is oriented in a side profile suspended from the wall and has fewer installation concerns than *Extrusion Detail (figure 7.2)*. I positioned the moveable gallery walls to hide the fact that these sculptures extend beyond their front area, composite from the clear glass looking into the gallery. As one walks into the gallery, their expected perceptions of these artworks unravel as they discover that they contain a significant depth. *Cavity (figure 10.1)* shares the gallery wall with *Dependent (figure 11.1)* as seen in *Installation View 3 (figure 22.1)*. This is the one gallery wall in the space where all three primary colors are represented. *Cavity (figure 10.1)* may be pointing at *Dependent's* edge. *Dependent (figure 11.1)* is more threadlike and fabric-like compared to other sculptures in the show. Sometimes viewers approach my work believing that everything they are seeing is 3D printed. *Dependent (figure 11.1)* on its own breaks that train of thought and may allow my viewers to become more aware of what is handmade and machine printed in the show by allowing the lace here in *Dependent (figure 11.1)* to function like lace.

CHAPTER FOUR

CONNECTION TO MATERIAL

At the front of the gallery, looking in from the outside hallway in Installation View 5 *(figure 24.1),* I have grouped my open-ended artworks. *Interfold (figure 12.1), Cluster Graph (figure 13.1), Adjoined (figure 14.1),* and *Ribboning (figure 15.1).* A few scenarios where my artistic process remains receptive to transformative processes such as combining three-dimensional (3D) printed lines and lace stiffener. I have combined manual craftsmanship with technology materialized as a plastic filament (PLA) to animate my sculptures and organize materials in a way that responds to the conditions of the physical world. At the Bauhaus School, Joseph Albers developed exercises designed to challenge students with the sensitive handling of raw materials such as wood, glass, fiber, paper, and metal. He wanted his students to deeply understand how these materials behaved independently and in concert with other materials.

> Albers said, "Learning is done not through the mastery of theory or knowledge, but the inductive experience of doing" (Adamson 84-85).

In my art practice, I use what I know about crochet and lace-making to experiment with making objects grounded in my conceptual knowledge of primary colors, shapes, and forms. In these fragmented works, *Interfold (figure 12.1), Cluster Graph (figure 13.1), Adjoined (figure 14.1),* and *Ribboning (figure 15.1),* the parameters are broader as to what these forms can become. These lace sketches are an exploration of PLA imitating open fabric and lace mimicking something geometric in form. Each fabricated swatch features a blurred boundary between the two different materials.

PLA contrasts itself from the lace by reflecting its plasticity under spotlights. Moreover, the fabric can be imagined as soft material like in *Adjoined (figure 14.1),* but my viewers' have to look closely for the material transition because PLA and thread are no longer seen as totally separate. *Adjoined (figure 14.1)* operates in a linear fashion, a separate condition from *Interfold (figure 12.1)* and *Ribboning (figure 15.1),* as *Adjoined's* PLA was printed flat on the 3D printed bed, distinguishing itself from a less of a three-dimensional value than the other prints. The top of the piece is PLA, a quite shiny and little more saturated blue material that gradually transitions to plastic in clear resin epoxy on lace to untouched lace line work. Here, PLA captures the decorative patterning that lace is known for and disguises itself in the lace trim.

Both *Interfold (figure 12.1)* and *Ribboning (figure 15.1)* are a closer imitation to fabric as the chain mail prints enhance repositionable flexibility that is absent in *Adjoined (figure 14.1)*. Here viewers can see the familiar meshed with traditional crochet lace making techniques or 3D printed creations depending on their age and relationship to manual craftsmanship and plastic manufacturing. The cross over between these two different realities demonstrates a compelling relationship between the handmade and the mechanized print. Crochet is an iteration of lace making popular in America to speed up the time it takes to make the decorative. I approach crocheting my forms with a 1.5 mm hook to better capture the intricate view of open lace fabric. The amount of negative space as a result of skipping stitches is just as important as positive line creation for aesthetic purposes.

Combining my hand-produced knots with 3D printing shows a direct contrast

between precision in printing and rarities in fiber practice. Cal Lane, an American sculptor, is known for adding delicate lace patterns to industrial steel products. Our work explores a similar dichotomy between industrial and domestic, strength and delicacy, but we approach man-made products differently in our art practice. While I appreciate Lane's research on gender roles and her unwavering commitment to the art of cutting sheet metal, my work re-imagines the relationship between manual craftsmanship and machine-made production by transforming the texture of materials. For example, Interfold *(figure 12.1)* has the flexibility of fabric, and *Beyond (figure 19.1)* holds onto the integrity of fabric by having abnormal edges. Throughout the exhibition, rethinking the roles of thread units and PLA lines across multiple components can be seen.

In *Ribboning (figure 15.1)* and *Interfold (figure 12.1)*, the PLA continues to be pushed more to act like fabric as the chain mail prints enhance re-positionable flexibility that is absent in *Adjoined (figure 14.1).* In *Interfold (figure 12.1),* the cascading pattern from an angular shelf works alongside the architecture, expanding its shape in the shadow longer than what is physically present. This work captures the materialized combination of thread and PLA, engaging with the architecture of the display edge like a table cloth or a bed cover. My viewers have been conditioned to understand what fabric is and its typical life in the domestic sphere. The constructed garment in Interfold defines the white display like how lace decorates a home environment, but contains PLA. A material that is no longer limited to industry.

At the same time, *Cluster Graph (figure 13.1)* makes my viewers aware of the masked structural components to lacework. By identifying the geometric armature in one

small section of the fabric with lace stiffener I am demonstrating the parallels between two different realities. This condition shows how crochet lace already possesses mathematical components that appeal to its aesthetics and shape. *Cluster Graph (figure 13.1)* may suggest that the handmade is becoming more obviously mechanized since one of the four sides to the piece is stretched into a more comprehensible design. In this piece lace identifies its relationship to the unit. I see multiple units coming together as a formation of a whole similar to American sculptor Orly Genger, who knots rope.

> She said, "This process of hand knotting. It is a means to an end. I see it as almost creating building blocks that I can later use to create the sculptures I want to create. I can make sculptures out of this material. I can take up space like all these traditional ideas of sculpture."

I utilize crochet knots as a means to build up sections of my pieces that engage with the viewer through their portable scale, which is true to the size of traditional lace making household motifs. Orly Genger, on the other hand, creates large-scale work that engages her whole body in her practice. While my crochet work is seen on a more intimate scale, it aims to suggest a closer look at handwork relative in size to how lace operates in the domestic sphere. Despite this, my forms still take up space and have volume, albeit not on a large scale like Genger's public sculpture.

In addition, I also utilize the colors red, yellow, and blue - the primaries that are foundational to the color system. However, in practice, primary color theory falls short because my materials are subjected to the limitations of supplies available to me. The color of PLA and the color of thread I acquire is dependent on what is available in stores,

and there is no neutral natural red product. When I create my forms, the pieces go through a color value change as resin is applied, which creates a tension between color theory and the reality of the materials in the physical world. In fact, none of the supplies I use abide by primary color theory in the real world.

CHAPTER FIVE

MATERIAL WITH VOICES

In my work the blending of my manual craftsmanship and the mechanized print are fully realized in the object's shadow seen *in Interfold (figure 12.1), Adjoined (figure 14.1), Ribboning (figure 15.1), and Tethered (figure 16.1).* At the 59th Venice Biennale, I saw Ruth Asawa's hanging looped wire sculptures strike the floor and wall with cast shadows. Like Asawa's pieces, my work plays with absence and presence. Absence of the maker in PLA or presence of the human hand in the temporality of making individual stitches.

Asawa studied under Joseph Albers at Black Mountain College in North Carolina and was encouraged to make art work that displayed a rigorous understanding of its material properties. Like Asawa, who wove hanging sculptures inspired by Mexican basketry weaving, I was trained to perform a craft like crocheting a baby blanket. I took these skills; working linearly, making in the round, and a lexicon of stitches taught to me by my grandmother to pursue these units in a new way to render structural form. Needle work is historically used to make embellishment. It is not typically used to make sculpture; but both Asawa and I deploy women's work to proliferate units to make forms.

Women's work is not the central aim of *Material World,* but the 1970s mid – 1980s Pattern and the Decoration Movement is an important precursor to my work that raises low art, taken from applied and domestic contexts, to the standard of high Western art practices. Artists from the Pattern and the Decoration Movement placed great importance on incorporating decorative motifs and designs into their artwork. They

specifically explored artistic traditions associated with various “applied” art mediums, such as quilting, embroidery, metalwork, and basket weaving, rather than traditional “fine” art. By making these various sources the central subject of their work, they highlighted the gender, class, and racial biases that had previously marginalized these art forms as “women’s work,” “craft,” or “non- Western art.” The movement sought to elevate craft and recognize applied arts’ significance in the art world. Similarly, my objective is to raise craft production importance, but I also aim to address the tension between handmade and artificial objects. This tension is particularly relevant in today’s context, with the possibility of 3D printing integrating itself into the traditional craftsman’s practice.

In my practice, I recognize that craftsmanship is an overlaying conversation between my handiwork and assistance from my 3D printer. All the materials in these forms, thread, resin, and PLA, suggest a combined importance through elongated shadows projected by spot lighting in the gallery. In my work, the shadow causes an erasure of the actual specificity of the thread. The looped knots and other junctures like these are blended in the shadow into a grade mass. The variations of blue values in *Tethered (figure 16.1)* that become one in the shadow are extended onto the wall. *Tethered (figure 16.1)* inhabits more space in the air than on the hovering display shelf. By taking up shelf space and bearing object weight in space I produce volumes of space. The equation between seemingly unresolved form suspended from the display shelf and the form dangling, holding onto the other form by threads, has my viewers considering what force caused this situation.

If my viewers are not aware of the various material intersections and their properties the viewers may consider the storyline behind the forms animated in the work. On the opposite wall of *Tethered (figured 16.1)*, the raw material used in many works throughout the show, is fed into the wooden mechanism from the floor and undergoes a transformation into individual chains. Then the thread is seen organizing itself into systematized fabric and volumetric forms in *Sabotage Detail (figure 17.2)* that may suggest material clogged in the gears of machine. *Sabotage (figure17.1)* challenges conceptual ideas of handmade and machine made. The wooden bowls referential of gears were carved on a computer numerical control (CNC) router but their bowl shape may be interpreted as craftsman's hands on a lathe. The term "Sabotage" originated from the Dutch textile industry during the Industrial Revolution where textile machines displaced handmade weaves. Numerous textile workers rebutted by throwing their wooden clogs, known as "sabots" into the machinery.

Sabotage (figure 17.1) may suggest that the hand and mechanized production work in a cohesive environment like a group project where everyone is not on the same page, but chaos turns to resolution through conversation. I grew up with digital gadgets and have grown to recognize that primitive and automated production are essential for different reasons. Sabotage gives a news-related nod to local textile mills in Gaffney, North Carolina, where people once replaced by mechanized production, are being added back into the making process. The Oxford Dictionary defines Sabotage as the action of deliberating damage to something. I know I feel sabotaged by my sister's cat when she gets a hold of the yarn ball, similar to the situation staged in *Ribboning (figure 15.1).* One

slight tug in the wrong direction and the time spent making the handmade will be physically lost. However, like in the piece, Sabotage making is a tradeoff of time well spent for object production, and maybe machines make this a more straightforward process, or they can make my viewers aware of the decorative loss. If *Ribboning (figure 15.1)* unravels, the gallery will only be left with the PLA part of the piece.

I also staged another situation in my exhibition with an art piece titled, *Interception (figure 18.1)*. In *Interception (figure 18.1),* I incorporated white thread to create a contrasting shadow in the vitrine. This was done to challenge my viewers'' perceptions of preservation and give them something unexpected to ponder. The shadow, not the material object, inhabits the vitrine and may suggest that the shadow has a larger importance to be preserved. By doing so, I aimed to change the conditioning that my viewers have experienced with traditional art museum displays. *Interception (figure 18.1)* is a unique, singular object in conversation with its shadow. The vitrine becomes a unlikely stage for the shadow.

Furthermore, *Interception (figure 18.1)* is also in conversation with other shadows in the back of the gallery. This piece may make my viewers more concerned or aware of how the other shadows operate in the exhibition, like in *Beyond (figure 19.1)* and the five blue composites I talked about before, *Ariel (figure 1.1), Up-down (figure 2.1), Standing (figure 3.1), Profile (figure 4.1), and Face (figure 5.1).* As a perspective element, the shadow suggests something further than the materials we are sharing a space with. *Beyond (figure 19.1)* is a black, fully materialized physical shadow that may suggest a space within the form through perception in a thin format.

CHAPTER SIX

CONCLUSION

Through this body of work there is a suggestion and an expectation through iterating a discrete set of units in different formulas that this is akin to established systems. The forms I am suggesting are kind of reminiscent of existing research processes. But as the work is realized by my hand, the pieces are disfigured and depart from the equations of a mathematical system. We normally would expect a unit to be a reduced form of a homogeneous entity. What I am presenting feels like simple forms, but in actuality, they are very complex and contain unconventional components demonstrated through rarities in my handiwork, color, and integrated shapes.

I found a system of making that aligns with the complexity of reality where we as humans want to put a quick label on something. This is handmade. This is man made. This is a circle. Nevertheless, the complexity of reality defies those simple labels. Combining these two binaries, plastic and thread, mechanized and craft renews lace-making traditions while considering the modern era of 3D printing.

My work might merge or confuse the boundary line between the digital fabricated and the handmade. But it is important to understand that the hand and the machine are working together now in 2023. *Material World* demonstrates a cooperative action between my hand and my 3d printing assistant and the possibilities of a new type of collaboration. In 2023, 3D printing has become a new reality of how people can make things from the comfort of their homes. My artwork explores the complexities of material

transformation in the physical world, where craftsmanship inhabits a complex place between the hand and the machine.

Figures

Figure 1.1
Ariel
thread
3.5” x 3.5” x 0.0625”
2023

Figure 2.1
Up-down
thread
10.5” x 7.75” x 0.0625”
2023

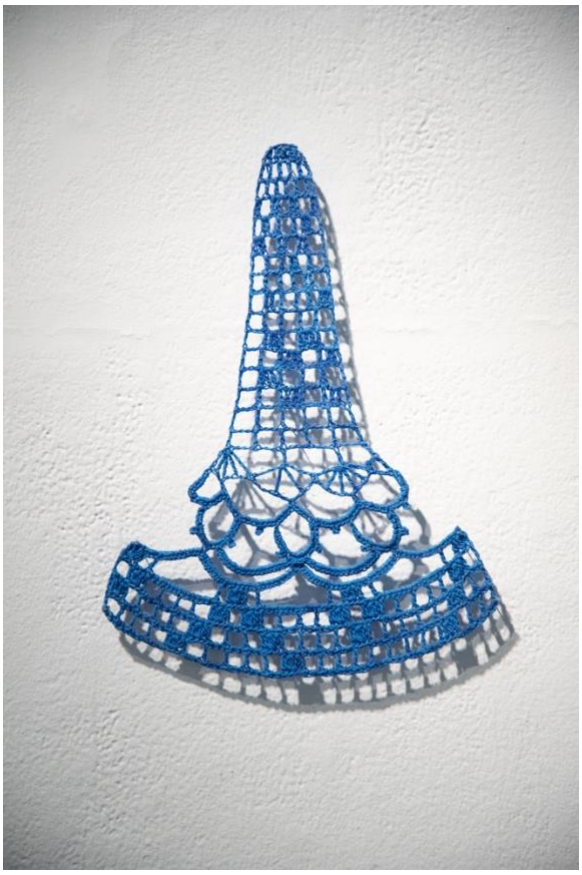

Figure 3.1
Standing
thread
10.5” x 7.875” x 0.0625”
2023

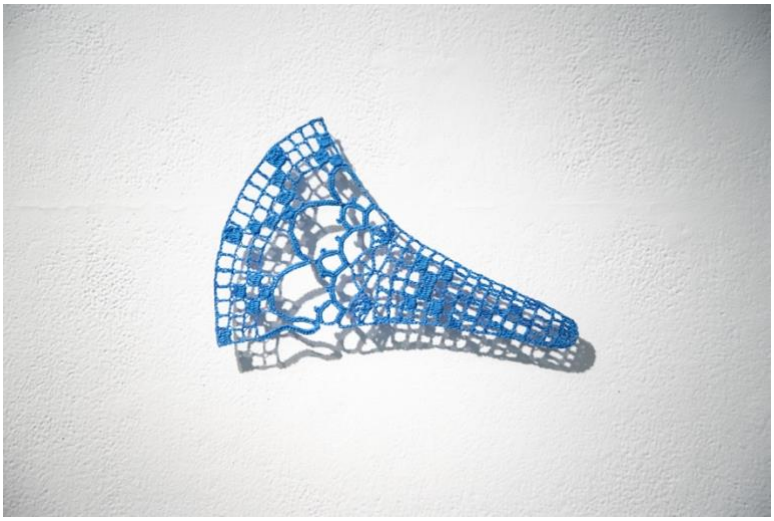

Figure 4.1
Profile
thread
7.875” x 10.25” x 0.0625”
2023

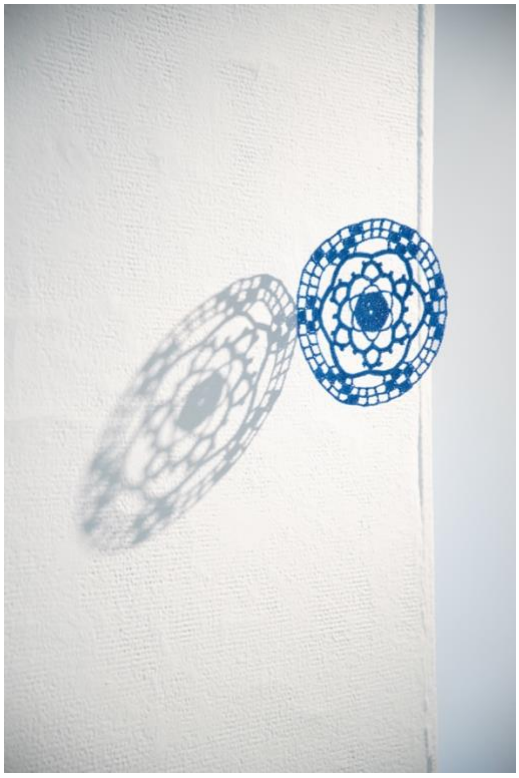

Figure 5.1
Face
thread
5.75” x 5.75” x 0.0625”
2023

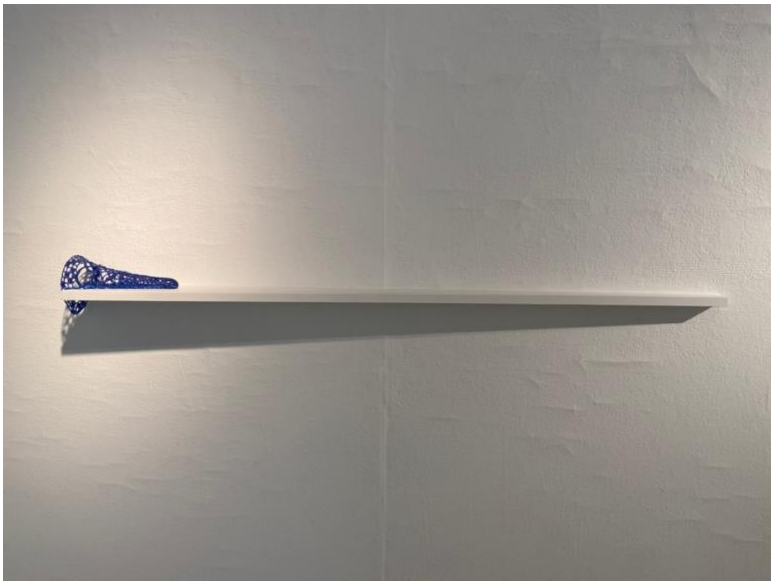

Figure 6.1
Implication Statement
resin, thread, wood
5” x 52.25” x 5.5”
2023

Figure 7.1
Extrusion
resin, thread, wood
16” x 14” x 12”
2023

Figure 7.2
Extrusion Detail
resin, thread, wood
16” x 14” x 12”
2023

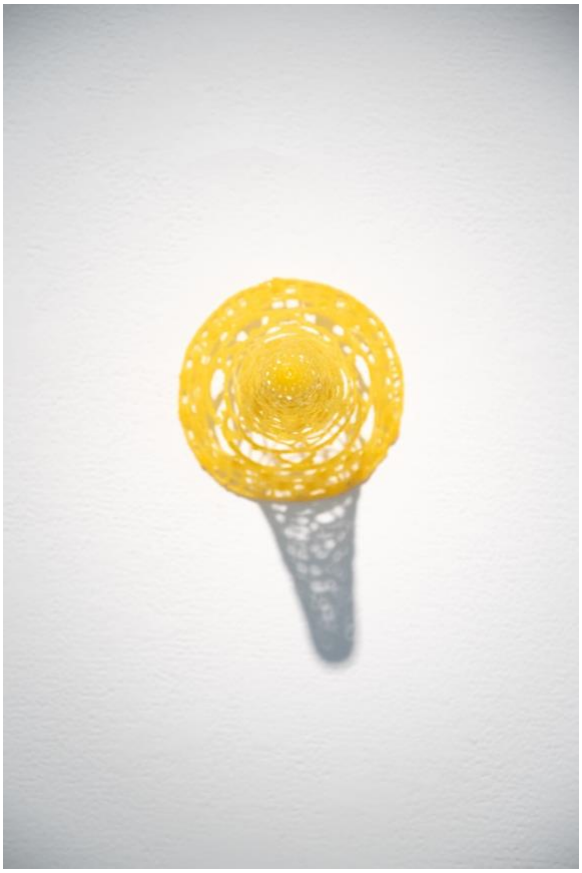

Figure 8.1
Outward
resin, thread
5.5” x 9.5” x 5.5”
2023

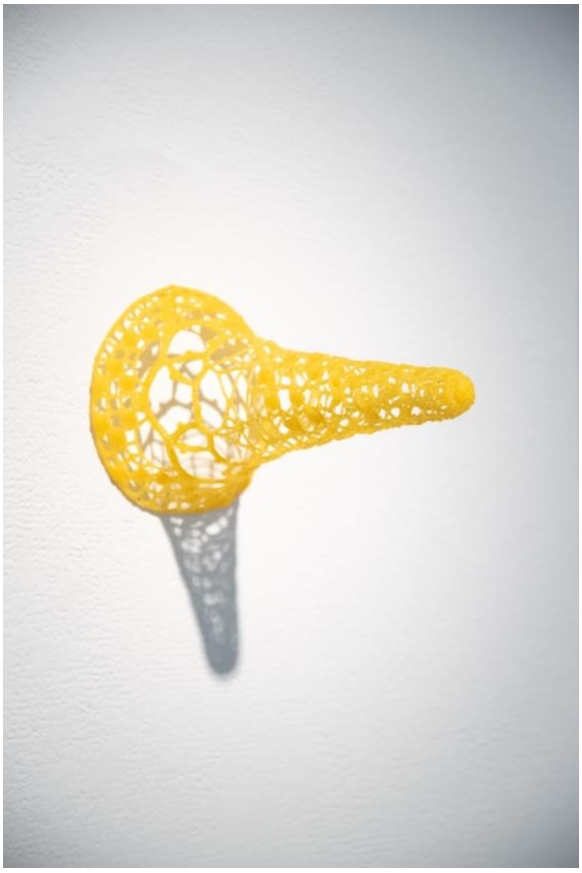

Figure 8.2
Outward Detail
resin, thread
5.5” x 9.5” x 5.5”
2023

Figure 9.1
Squared
resin, thread
6” x 6” x 9.5”
2023

Figure 9.2
Squared Detail
resin, thread
6” x 6” x 9.5”
2023

Figure 10.1
Cavity
resin, thread
6” x 9.25” x 5.75”
2023

Figure 10.2
Cavity Detail
resin, thread
6” x 9.25” x 5.75”
2023

Figure 11.1
Dependent
resin, thread, wood
23” x 13.5” x 5.5”
2023

Figure 12.1
Interfold
plastic filament, thread, wood
9.5” x 11.5” x 9”
2023

Figure 13.1
Cluster Graph
thread
12” x 3.5” x 0.125”
2023

Figure 14.1
Adjoined
plastic filament, resin, thread
3” x 8.5” x 0.125”
2023

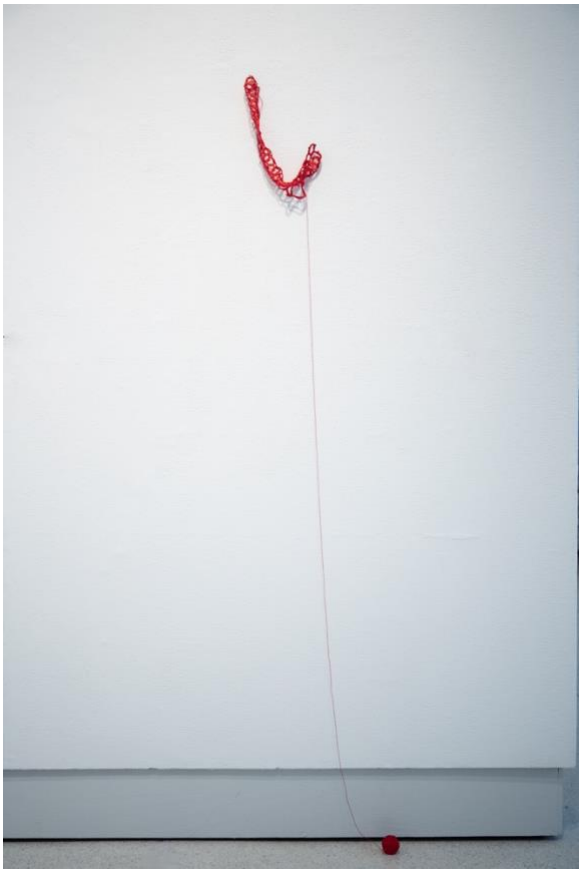

Figure 15.1
Ribboning
plastic filament, thread
64.25” x 11. 875” x 3”
2023

Figure 15.2
Ribboning Detail
plastic filament, thread
64.25” x 11. 875” x 3”
2023

Figure 16.1
Tethered
plastic filament, resin, thread, wood
30” x 32” x 5.5”
2023

Figure 17.1
Sabotage
resin, thread, wood
63” x 21.5” x 5”
2023

Figure 17.2
Sabotage
resin, thread, wood
63” x 21.5” x 5”
2023

Figure 18.1
Interception
resin, thread, plexiglass
50.5” x 16” x 12”
2023

Figure 19.1
Beyond
plastic filament
5.5” x 6” x 0.0625”
2023

Figure 20.1
Installation View 1
resin, thread, wood
2023

Figure 21.1
Installation View 2
resin, thread, wood
2023

Figure 22.1
Installation View 3
resin, thread, wood
2023

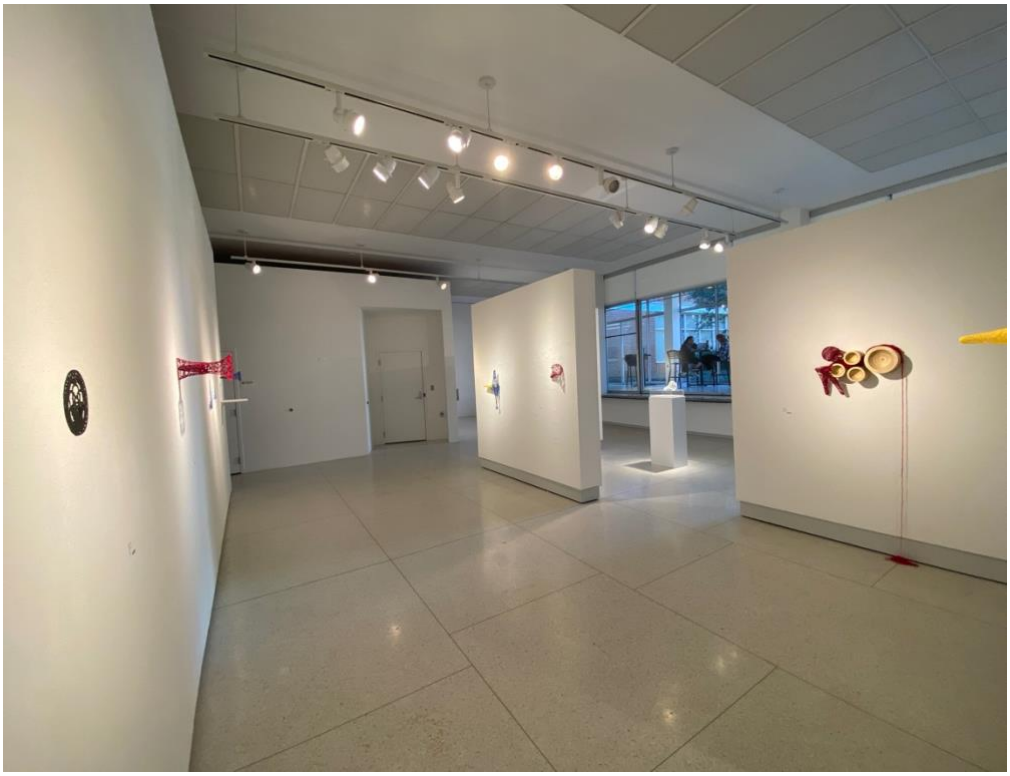

Figure 23.1
Installation View 4
plastic filament, resin, thread, wood
2023

Figure 24.1
Installation View 5
plastic filament, resin, thread, wood
2023

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