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**Migration of Powers**

A Thesis Presented

by

**David Weiner**

to

The Graduate School

in Partial Fulfillment of the

Requirements

for the Degree of

**Master of Fine Arts**

in

**Studio Art**

Stony Brook University

**May 2011**

**Stony Brook University**

The Graduate School

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Abstract of the Thesis

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**2011**

This thesis is an exploration of my artwork throughout graduate school. It addresses my transformation from a formalist sculptor making objects, to an adventure artist creating mixed media installations. My thesis exhibition presented a multi-channel video and sculptural installation, examining energy exchange, scale and heroics. The paper investigates scientific, personal and theoretical concerns of my event-based creative practice including movement, physical forces, risk, faith, and endurance.

## Table of Contents

List of Illustrations.....	v
Introduction.....	1
Theoretical Contexts.....	3
Case Studies.....	6
Systems.....	7
Changing Phases.....	8
Cloud Point.....	12
Thesis Exhibition.....	17
Conclusion.....	25
Bibliography.....	28
Appendix.....	30

## List of Illustrations

Figure 1a, <i>pillow lava</i> , 2011.....	28
Figure 1b, <i>wax extrusion</i> , 2011.....	28
Figure 2, <i>becoming other</i> , 2010.....	29
Figure 3a, 3b, <i>glass tank</i> , 2009.....	30
Figure 3b, <i>glass tank</i> , 2009.....	30
Figure 4, <i>Systems</i> , 2009.....	31
Figure 5a, <i>Changing Phases</i> , 2009.....	31
Figure 5b, 5c <i>Changing Phases</i> , 2009.....	32
Figure 6a, <i>55 gallon extrusion rig and work deck</i> .....	33
Figure 6b, c <i>Cloud Point</i> , 2010.....	34
Figure 7a, <i>Thesis Rig</i> , 2011.....	35
Figure 7b, <i>Copper Manifold Pool Heater</i> , 2011.....	35
Figure 8a, 8b, 8, <i>Thesis Extrusions</i> , 2011.....	36
Figure 9a, 9b, 9c <i>Miniature Extrusions</i> , 2011.....	37
Figure 10a, 10b, <i>Fire Chief and Police at Residence</i> , 2011.....	38
Figure 11a, 11b <i>MFA Thesis Gallery</i> , 2011.....	39
Figure 11c, 11d, <i>MFA Thesis Gallery</i> , 2011.....	40

## I. Introduction

Undergoing coursework in chemistry, biology, performance and visual art while earning my BA in psychology as an undergraduate student at SUNY Albany deepened my understanding of the links between perception, cognition, behavior, and creativity. Simultaneous investigation of these disciplines fueled the production of artworks rooted in introspection and abstraction. Realizing these interconnected investigations through sculpture, I created castings and fabrications inspired by physical and metaphysical interpretations of time, flow and energy exchange.

Continuing to expand my knowledge base of sculptural processes after graduating, I worked for Polich Tallix art foundry, in Newburgh, NY. During my artisan training there as a patinist, I developed the ability to produce glass-like finishes on bronze, rich in color and depth. Through the surface application of liquidized elements under a heat stimulus [Cupric Nitrate (copper + nitric acid) and directed flame], the metal oxidation process is prematurely advanced to a near finished state. This ancient practice of rapidly aging non-ferrous metals stabilizes their exterior surface. Learning to function as a catalyst within set reactions of elemental forces, accelerating the developmental processes of time, I internalized the role of alchemical mediator in my artistic practice.

Incorporating this philosophy into my graduate studies in the visual arts, I devised a new way to produce large-scale sculpture in time. To preserve the fluidity, speed and connectivity intrinsic to my intermediary approach, I shifted to an aquatic workspace. Working underwater reduces the forces of both gravity and friction on the artist and his material. Extruding molten microcrystalline wax into cold water, the wax instantly

changes its phase state from liquid to solid. The interaction reconfigures the lattice structure of the wax as it spreads and solidifies. Shocking the material into transformation under these variable conditions yields an infinite variety of irreproducible organic growths. Petroleum-based, this hydrophobic wax is impenetrable by water. Upon colliding, the wax buckles and bends, opposing the water's molecular makeup. As a result, the water's flow patterns are imprinted into the surface of the wax.

Working submerged within this underwater environment enables the complete integration of self in the reaction. In an effort to extend the length and girth of the forms, I coddle the wax upon entry, gently restraining the influx of material and allowing the crystalline structure to coagulate and grow. The residual forms are a topographic archive of the event. Video and photographic documentation of the process capture the energy exchanged in these event-based sculptures.



## II. Theoretical Contexts

This thesis will examine the aforementioned body of work through the empirical lenses of science, as well as the conceptual frameworks of philosophy and spirituality. Contextualizing the work within these multifaceted perspectives facilitates a well-rounded conception of my process and the motivations fueling it. This interdisciplinary understanding incorporates rigorous physical experimentation coupled with scientific inquiry and concludes with metaphysical and philosophical comprehensions of the universe.

Likening my wax extrusions to that of submarine volcanic eruptions, the residues are conceptually and formally akin to *pillow lava*. (figures 1a, 1b). Forced into existence under cold-water conditions, these transient wax forms parallel the primordial expulsion of energy from beneath the earth's crust. Similar to the evolutionary explanations of volcanology, my process is also cyclic. Originating in the submarine phase, the waxes are transplanted into a gallery space. This however does not constitute an endpoint; returned to my backyard upon the conclusion of the exhibition, they continue to transform under the conditions of direct sunlight. Losing their elevation as they soften and erode, they slump into undifferentiated masses, eventually returning to their molten phase state. The wax is then accumulated and re-extruded. The continual flux of this material allows the extrusions to become something other than an end result.

I interpret my close proximity to the creative process through Deleuzian philosophy. The aquatic workspace is equivalent to Deleuze and Guattari's concept of *assemblage*. Within this plane of immanence, the penetrating crystalline wax folds itself over, under and through the stratified complex of water, spreading in rhizomatic growth formations. Expanding in all directions, the wax unfolds from multiple nodes rupturing into lines of flight. The body of water deterritorializes itself forming "an image, a tracing" of the incoming wax, and in turn the wax reterritorializes on that image. The wax is ultimately deterritorialized by the water, becoming a part of the feminine womb-like assemblage.

My presence and manipulations within these multiplicities are integral; merging with these surrounding forces, I modulate the speed and flow of the reaction. I follow the wax's ruptures with the aim of "lengthening, prolonging, and relaying its line of flight". Inserting myself in this plane of immanence, I *become* a body without organs, existing in the liminal space between the wax and the water (figure 2). (D&G, *1000 Plateaus, Capitalism and Schizophrenia* p.11).

"There is in this a radical affirmation of the sort of possibilities for becoming that we cannot think of in logical or moralistic terms: becomings that can only be felt or sensed or conjured, that require us to take risks and experiment in ways that affirm the vitality, the energies and the creative animations of existence". (Sotirin, *Deleuze Key Concepts*). Breaking new ground requires making new rules. Laws are set in place to serve and protect society; actions perceived as potentially dangerous or destructive are forbidden. In the name of creativity, it is the responsibility of the artist to reclaim his humanity, bucking the system if necessary in order to realize his passion. Departing from

the laws governing society, I make a movement that requires a leap towards faith. Acting as an intermediary of forces far greater than myself positions me in precarious situations. Venturing into unknown territory, I must proceed with absolute commitment to my actions; believing in my success is essential. These self-tests offer purification and truth by distilling the creative spirit and revealing what I am made of. "I have taken my cue from those rare screwballs that emerge every once in a while in unexpected places, who are crazy to transform themselves into the Essential Absolute of each moment that passes through them and who are perhaps in that manner the purest living forms of art."

(Kaprow, *Untitled Essay* p.2).

Understanding this art-making model through Kierkagaardian philosophy, I strive to become a *knight of faith*. Going through the necessary act of concealment, I informed no one surrounding me of the serious potential hazards inherent in my process. Keeping this information secret from my family and neighbors, I abandoned my ethical concerns for their well being in order to fulfill a higher purpose. Compromising the safety of those inhabiting the space around me produced anxiety that I could not completely overcome. Proceeding with this impending fear was an ongoing struggle, torturing me with restlessness and sleeplessness. I do not equate the severity of my actions with that of Abraham's as interpreted in Kierkagaard's *Fear and Trembling*; rather I will draw a humble comparison to the difficulty Abraham endured in following his faith.

## Case Studies

Early experimentations in this body of work were conducted on a small scale using an amateur engineered wax extruder inside a 50-gallon Rubbermaid© bin filled with water. The extruder consisted of a one-quart wax reservoir gravity-fed through copper pipe. To keep the wax molten, the pipe was heated by coiled copper tubing fed with steam. Trials with this flawed initial design revealed several fluid dynamic hurdles; overcoming these required the development of a more sophisticated setup. Primarily, the power of gravity alone could not provide the smaller volume of wax with enough force to successfully penetrate the larger body of water. Solidifying upon entry, the hardening wax clogged the pipe outlet almost instantly. In order to create a jet stream of wax powerful enough to penetrate the water from beneath its surface, an increase in pressure was required. Modifying a pressure-fed, two-quart capacity wax injection machine provided adequate force, while permitting flow and speed control and enabling the use of variable-pattern output nozzles.

Presenting this process and the wax residues it produced during mid-term critiques as groundwork for the final product, I proposed my intentions of scaling-up this operation to enable self-submersion and the creation of monumental forms instantaneously. This vision was regarded by most as inherently over-problematic to realize while attending graduate school. Faculty informed me that university building safety and fire codes prohibited engaging in any such hazardous behavior. They

suggested that I consider more feasible directions for my artwork. I perceived their lack of support for this ambitious proposal as a challenge to react against. Committed to realizing my project alone, I proceeded forward in my parent's backyard. "For an idea that does not at first seem insane, there is no hope." (Albert Einstein)

### *Systems*

Preparing for *Systems* (figure 4), our first-year group-show, I acknowledged there was insufficient time to fully realize my goal. Resolving to develop my process in increments, I built a 200-gallon water tank using plywood and recycled shower doors, measuring 30 inches by 24 inches high by 72 inches long (figures 3a, 3b). This increased vessel size facilitated the production of larger wax forms. Its glass walls provided a clear video window to capture the metamorphoses. However, none of this early documentation was included in the exhibition. Dissatisfied with my level of proximity in the reaction, unveiling the process was postponed until I could fully submerge myself in the tank; only the waxes were shown.

Exhibiting these new residues as found objects entailed suspending them with monofilament from the ceiling, sprawling in an S-formation across the rear of the gallery. This levitating installation of the forms echoed the buoyancy of their aquatic genesis, while also providing viewers an immersive space to navigate through (figure 4). Accentuating the form's detailed textures through a dry-brush application of metallic pigments, this surface treatment functioned as a faux patina. This alluded to their

potential to be cast directly in bronze, furthering the concept of transforming molten material into form.

During final critiques, I presented the installation as another step towards realizing the grander version yet to come. The feedback addressed the need for more decisiveness in my practice, asking which would take precedence in the exhibitions to follow; my process or the objects yielded? Responding to this perceived demand for categorization, I expressed my intent to divide my attention equally between expanding the scope of both my process and the residues it produced.

### *Changing Phases*

Dedicated to realizing my original concept of self-submersion for my upcoming solo show, I considered many possible ways in which to accomplish this. After conducting extensive research on commercially available containment tanks, I purchased a plastic vertical water storage tank. Cylindrical in shape, it measured four feet wide (diameter) by eight feet tall, just large enough to accommodate my vision for complete submersion of self. Its only design flaw was its narrowing conical top-section, offering an extremely tight entryway measuring a mere 18 inches.

In order to increase the size of my waxes I needed a larger extrusion device. Unable to afford an industrial scale wax injection machine, I resourcefully fabricated my own. Retrofitting two 16-gallon (32 times my previous workload) beer kegs with

pressure-fed valve stems, I placed them atop two modified propane cookers. The ideal “wok-shaped” bottoms of these kegs provided excellent heat exchange, allowing me to process the wax quickly and efficiently.

Submerging myself in the tank dramatically enhanced the intrigue of the video footage; however documenting this new level of involvement inside an semi-opaque tank posed several challenges. One solution involved creating an 18-inch Plexiglas “port-hole” in the tank to film through. While this answer seemed viable for live viewing, it was unsuitable for documentation as it limited filming to a single vantage. As a flexible alternative, I purchased a camera housed for underwater video. Although well equipped for filming in such a tight space with a fish-eye (170 degrees) lens, perfect camera placement remained critical. With no ability to verify the camera's framing, and no room for second chances, every missed opportunity stung. Over the course of several runs, I learned to set the camera "blindly", successfully framing the shots.

Working primarily at night in order to control lighting conditions and minimize undesirable attention from the neighbors, I lit the translucent tank externally (see slide). Sliding into this glowing chamber was akin to an astronaut boarding his shuttle to space. Cold, confined and uncertain of the outcome, slipping beneath the surface was an act of faith. Breaking new ground with each run, the adrenaline coursing through me never diminished.

One of the first and most treacherous of trials remains crystallized in my memory forever. Preparing for a run, I normally filled the tank just beyond its narrowing point. This empty uppermost two-foot segment served as storage space for the buoyant wax and the displaced water. It also accommodated room for me to re-emerge and breathe.

Accidentally overfilling the tank on this occasion, the water level reached the brim. Everything else was set and ready. This seemed a small technical difficulty to solve; simply drain the excess. However, the keg containing molten wax was poorly positioned directly under the bleed valve of the water tank. Opening this valve, cold water spilled over, dousing the flames below the heated keg. This continual outpour against the keg's walls rapidly cooled the wax, threatening the sustainability of the entire reaction. Monitoring the keg temperature by touch alone, fear that my hours of painstaking preparation were for naught took over. After about half the excess water drained, unwilling to allow the possibility for defeat, I struck a compromise and closed the valve. This mistake almost cost me my life.

Leaving insufficient space for the wax to rise, I found myself trapped underwater beneath nearly two hundred pounds of material. Repeatedly slamming my body into the hardened barrier, I could not manage to break through it. Normally the wax floats freely and is easy to push through; this time the wax was packed tightly into the narrowed tank top, forming an immovable blockage. Panic-struck and dying for air, no one outside could help me. Shifting into another realm, I gathered my thoughts into a calm space. Silencing the need to breathe, I sprung upwards from the bottom with all my being, straggling through the entangled mass to the surface just enough for my lips to protrude. Barely audible, I instructed my Sister on how to reopen the valve in order to drain the excess water. After about twenty minutes (a seeming eternity), the water level dropped and the blockage dispersed, affording sufficient clearance to pull myself out. This harrowing experience humbled me, demanding continued appreciation of my mortality.



Titling my first solo exhibition *CHANGING PHASES* (figures 5a, 5b, 5c), the wax residues were again suspended throughout the gallery. Making traces of the formations gathered above me in the tank, I organized the residues in clustered, orbital constructions. Interested in conveying my vulnerability while working, the floating clusters referenced those unnerving blockages that formed above me in the tank. Precariously hanging from monofilament over viewers' heads, the heavy elements threatened to collapse under their own weight at any moment.

The documentation captured from inside the tank was projected on a larger than life scale between the formations against the main wall of the gallery. To maximize the vibrance and contrast of the video projection, the lights remained off. As a solution to showing forms in a darkened space, green and blue phosphorescent pigments were applied as a surface treatment, enabling them to absorb and re-emit light. The gallery lights were turned on each night and off each morning. Viewers were offered ultraviolet flashlights to further activate the phosphorescence, inviting them to highlight and trace various sections of the forms. These temporal tracings referenced the aspects of memory and brevity inherent in the process.

The critiques I received on this exhibition largely returned to the past issue of precedence. While some faculty found my conceptual and aesthetic decisions for displaying the forms interesting, others regarded their presentation as contrived. The latter group felt the formations seemed “too controlled” and “not confrontational enough” in scale to achieve my desired impact. Located dissonantly within the space, each cluster functioned as a separate entity rather than a cohesive environment. Further, many considered the interactive pigmentation component an unnecessary distraction.

Almost all feedback unanimously favored the video, viewing it as the dominating force behind the exhibition. This raw footage expressed all of the intensity of the internal and external turmoil I experienced while working, evoking for them as viewers the same dichotic sensations of anxiety and intimacy. Largely in agreement with the latter critique, I responded with plans to continue increasing the size of the residues; if each individual element were large enough to confront the viewer, I could refrain from arranging them into reflected formations.

### *Cloud Point*

In my effort to create larger, more confrontational residues, it was necessary to upscale my extrusion rig yet again (figure 6a). This time I modified 55-gallon oil drums, more than tripling my previous workload. Although these drums offered greater possibilities, unlike the kegs they were not designed to hold contents under pressure. When pressurized, the paper-thin steel expanded in a balloon-like fashion. Their lack of integrity for this process posed a significant safety concern. Should a drum full of molten wax wrapped in electric heating elements rupture due to an unforeseen spike in temperature or pressure, the results would be detrimental to anyone within a close proximity. Fortunately, this imperiling threshold was never reached.

To afford more space for this larger influx of material to grow, displace, and be removed in tact, I trimmed the narrow top section of the tank, expanding the entry/exit

diameter from 18 inches to 48 inches. This widening also served as an improvement to my safety, greatly reducing the possible for being trapped underwater. However, removing the gusseted top weakened the rigidity and structural integrity of the tank. Compensating by building an elevated support structure surrounding the tank, the addition doubled as an eight by eight foot work deck. This platform was instrumental for extracting and temporarily storing the wax after each run.

These expansions extended my work time well beyond my breath-holding capacity. Rather than being forced to stop working to surface for air, I invested in a SCBA (self contained breathing apparatus). Workspace being sparse, I opted for a "hookah" system, consisting of a small air compressor (mounted on the deck) with a breathing tube dropping down into the tank. Not only did the SCBA enable me to stay down for as long as I chose, it made the operation somewhat less treacherous. If I found myself trapped below, I would not drown provided the compressor did not lose power. However, due to the extensive drain on my residential wiring, running three separate air compressors (one for breathing, the other two maintaining wax pressure) caused numerous power outages.

Completely depleted of funds due to excessive expansion costs, investing in a generator was not possible. Relying on a machine for life-support requires trusting it will function. Betrayal by your lifeline while submerged in a confined underwater space beneath nearly 500 pounds of wax is a terrifying sensation. Each time I went under, the looming possibility of this occurrence never left my mind. Fortunately, during these frequent power failures, the newly widened exit permitted a quick escape.

Although the new forms produced were exponentially larger (and heavier) than the previous batch, they were not yet monumental enough to confront the viewer as individual elements. Grouping them into larger formations was again necessary to effectively transform the gallery. The largest residues averaged 75 pounds, far too heavy to suspend from a drop ceiling. Even if the ceiling were more substantial, strung from their appendages they would surely cause them to collapse under their own weight.

The simplest solution was to position them directly on the floor. Against the idea of displaying the forms as grounded, I re-imagined another way to present them as floating. Inspired by the indeterminable scale in photographs taken of the wax inside the tank (see slide), I experimented with displaying them atop black Plexiglas (see slide); its black reflectivity visually alluded to a depth of water below. To my dismay, this material proved cost-prohibitive for creating a large-scale installation. As a cost-effective solution to capturing the reflectivity of water, I decided to use actual water. Researching several potential containment vessels, ranging from preformed ponds to hydroponic garden trays, none were found conceptually relevant or financially feasible. Creating my own vessels out of necessity, they were wrought from the exact same translucent white polyethylene material used to create their “Mother” tank. Scavenging over 40 plastic 55-gallon barrels from local car wash businesses, I cut, carved and thermo-formed each one into shallow vessels resembling sea forms for the waxes to nest in and grow over.

The vessels sprawled throughout the gallery in three organic formations. Each one was filled with an average of three gallons of water. Expanding on the concept of bringing water into the gallery to help transform the space, three video clips of rippling water were projected across the gallery floor. To enhance the shimmer it imparted on the

waxes, blue, white and silver iridescent pigments were applied to their surfaces. As planned, the ripple projections reflected off the natural lens surface of the water, bouncing onto the walls and ceiling. This manipulation of light and form was intended to provide a more direct connection between the residue and the moving image.

Titling the exhibition *CLOUD POINT* (figure 6b, 6c), the temperature at which a liquid spontaneously shifts to a solid, I allowed the abstract nature of the metamorphosis to prevail. Editing out any presence of self from the process footage obtained opened the interpretation of the piece for the viewer, transforming the video from a documentary into an abstract film. The piece was composed of a loop of five clips, assembled in shuffling sequences. In between each clip I inserted a short "refrain", composed strictly of an upward cascade of bubbles. This refrain, coupled with the shuffled clip order disguised the loop.

Furthering the creation of atmosphere, I decided to project my process footage on the scrim employed in theatre. Restricted by the costs of these custom-made scrim, I made my own using ultra-fine mosquito netting. Strung in an S-formation throughout the gallery from floor to ceiling, it created a veiled pathway between the three groupings of wax. Choosing the tightest weave available, the netting held light amazingly well; even catching some ripple reflections off the water.

Projecting the process footage into the corner, the video was doubled, hitting the netting first and ending on the adjoining walls behind. The interstitial three feet of space between created a powerful three-dimensional effect from a frontal perspective. Taking the opportunity to venture into this liminal space between the scrim and the walls,

viewers remarked feeling intimately enveloped within an otherworldly environment (see slide).

In collaboration with composer Krystal J. Grant a soundtrack was created for the video. With great skill and sensitivity, she restructured the existing audio, contouring it to the flow and continuity of the visuals. Her modifications brought out the dark, alien nature of the footage. For example, by altering the pitch and camber, she morphed the sound of my breath (bubbling) into an ominous heartbeat. The sounds permeated the entire experience of the space.

The critiques of this exhibition were both positive and constructive. Acknowledging my success in weaving an immersive experience, people maintained their favor for the video elements over the residues. Regarding the presentation of the wax, many regarded the barrels as problematic both formally and conceptually. Each vessel took far longer to create than the fleeting moments spent underwater forming all of the waxes. Although each one read as an organic form, they were merely mimicking nature while the residues were true results of chaotic combatting forces. Even though the waxes traversed from one barrel to the next, they ultimately functioned as unnecessarily restrictive containers. Succeeding in presenting the wax in water, they failed to provide a strong presence of water, which the light projections and sounds accomplished far more successfully. The installation was regarded as beautiful and intriguing, but overly structured.

In agreement with this feedback, I acknowledged that my attempt to present these residues in an environment resembling their birthplace was unnecessary. In future exhibitions to come, the forms would be exhibited as specimens, presented in the

orientation in which they solidified. Maintaining them as purely residue, I decided to refrain from further attempts to transform them using pigments or lighting effects into something other.

### *Thesis Exhibition*

In order to display an exact record of what transpired in the act of making, it was necessary to construct "nets" to catch the wax as it hardened. Creating these nets from several layers of welded steel grids leaving room between each layer; this spacing enabled the wax to flow through these stratified structures. I viewed them not as armatures to be covered or coated, but three-dimensional sketch boards to be "drawn" upon.

Accommodating these 48 by 96 by 24-inch grids required expanding my workspace; I needed a temporary swimming pool. Soft-walled vinyl pools require a perfectly flat surface for set-up. Leveling a 15-foot circular patch in my parent's yard required bringing in about ten yards of "fill", approximately 20,000 pounds of rocks and dirt. With no budget for earth-moving machinery or hired help, my father and I trucked this mass of earth one wheel barrel at a time from the driveway in front of the house (where it was dumped by the delivery truck) to the backyard, tampering it into a level mound. This monumental task was only the beginning.

Following my instincts to continue to raise the stakes, I set my oil drum extrusion rig atop the eight-foot high work platform I built the summer before (figure 7a). The

primary motivation behind this elevated setup was to minimize restrictions on my mobility inside the pool. Extending out perpendicularly from the exit valve on the bottom drum was a ten-foot length of inch-and-a-half diameter supply pipe, coupled with an equally wide 12-foot long hydraulic transfer hose. The flexible hose afforded me free range of motion.

This elevated rig also enlisted the aid of gravity in moving the wax. Battling the sub-freezing temperatures of winter, every advantage counts. Since the drums were stacked atop one another, the rim of the top drum measured a towering 15 feet high. Spanning far above the yard's fences, it was necessary to wall off the structure on three sides to shroud the operation from my neighbors.

In order to keep the wax molten while traveling across a distance of 22 feet in winter temperatures, I coiled my supply line with electrically powered heat tape. To reduce the potential for electrocution, I made sure all power cable connections remained out of the pool. The extension cords powering these tapes were coiled around the hot supply pipe, hanging dangerously overhead the water

When researching these potential risks, the heat tape's manufacture vehemently stressed that no portion of the tape be submerged in water. Disregarding their liability warning out of sheer necessity, I ran the silicone-coated electric heat tape down under the water. This calculated risk was not made lightly. On the contrary, stepping into liquid with high-voltage terrified me. However, my work focuses on overcoming obstacles, fear being the primary barrier in life's tribulations.

To keep the pool from freezing, I fabricated my own water heater. Creating a six-layer manifold (see slide) measuring 24 inches x 24 inches x 18 inches from 60 feet of



three-quarter inch copper pipe enabled me to fill the pool with warm water (figure 7b). The heater sat atop three propane burners, producing a combined output of nearly a half million BTU's. At a full flow rate of 12 gallons per minute, the tap entered the manifold at 35 degrees and exited at 65 degrees. At half that flow rate, the temperature rose into the mid 80's; half that rate again (three gallons per minute) it rose above 112 degrees. Though the air temp hovered around 15 degrees. Once full, I was able to maintain a pool temperature of about 60 degrees by re-circulating the water through the heater.

Although instrumental in maintaining the critical work range temperature of the water, the heater could not feasibly sustain the stability of the vinyl pool. These pools are not designed for use in cold weather. When the heater was not in use, the sub-freezing air temperatures caused the vinyl to crack and split, creating hundreds of fissures and tears, rendering it nearly impossible to retain water. Draining the pool several times to patch these holes, my efforts were largely futile. Allowing the pool to empty between extrusions, each time it rained or snowed, thick ice formation on the bottom of the empty pool resulted in new holes. Unable to find a replacement pool in the off-season of winter, I struggled to maintain the stability of the liner. Re-filling the pool required leaving the tap running at full flow for days at a time while preparing for each run. Filling at 12 gallons per minute the 3,000-gallon pool should have filled in less than four hours. This inefficient system resulted in severe flooding, destroying the pools level pad and compromising the foundation of my parent's house.

Documenting these ceaseless trials and distresses, I compiled a series of photographs and videos (figures 8a, 8b, 8c). Although I regarded these records of overcoming obstacles as personal triumphs, I did not envision including them in my

upcoming thesis exhibition. Maintaining my concentration on the abstract nature of the wax transformation, I intended to focus the exhibition around the reactionary process.

Envisioning showing only video obtained through another collaborative effort, this one with Prof. Thomas Cubaud of the Heavy Engineering Department. Specializing in the field of fluid dynamics, he operates the microfluidics lab at Stony Brook University. With the help of his skills and knowledge of high-speed imaging systems, we exposed the true beauty of this material exchange. Carrying out the extrusions, miniature scale without my intervention, the reaction was photographed at a rate of 2000 frames per second. At this rate, one second of footage yields about one minute of video. Slowing the rate to 28 frames per second produces stop animation footage aesthetically akin to an x-ray. Allowing you to "see through" the wax as it crystallizes, its hypnotic exchange with the water is revealed. The pure aesthetic of this footage is spellbinding (figures 9a, 9b, 9c). I believed juxtaposing these miniature investigations against the monumental forms created in the pool would create a focused installation, offering the viewer a well-rounded examination of time, space and scale.

Although eleven wax grids were constructed, only three were used. After completing the first, the local fire chief and police arrived on the scene and advised me to shut down my operation. Responding to a report of smoke from my neighbors, they sought further investigation. Upon questioning, I reassured them that everything was under control. Just before they made to leave, they asked for a closer look at my setup. Conveying the impression of straightforwardness, I granted their request; one glance revealed the multitude of fire safety and building violations. The elevated work deck built without a permit or licensed contractor was not within code. Finding a propane tank

precariously sitting along the edge of the platform, and electrical wires fed through outlets by my bedroom window dangling above the pool left them speechless.

Explaining my art-driven objectives, concealing and downplaying as many of the hazards as possible, they remained skeptical of my sanity. My mother came outside to help plead my position as graduate student aspiring towards innovation within an academic pursuit. Addressing the officers from an honest standpoint (something I was not then capable of), she stressed the harmlessness and temporary nature of my operation. Because she was not fully aware of the impending dangers, her words rang truthfully, and were well regarded.

The fire chief became sympathetic to my cause, stating "...It's great to see you pushing the envelope this far in the name of your art; unfortunately you live in Nassau County... When the town hears of this they will shut you down and issue fines starting in the thousands." Stating his lawful duty to report these code violations to the town, the fire chief told me to expect several fines should they arrive and find this setup. Issuing this warning on the Sunday before Martin Luther King Day, he estimated that the earliest they would come to inspect the premises was Tuesday morning. Thanking them for their advice and concern, I covertly photographed both the fire chief and the two policemen as they made their exit, a necessary document warranting my forced premature end (figures 10a, 10b).

Assuring my distressed parents I would break down the setup before the authorities returned, but not before one last run. One form alone was insufficient to substantiate the need for such an elaborate production; I needed at least three. Out of respect and awe of all of my efforts, they agreed to a final run.

The next 48 hours were the most intense of my life. Working outdoors through unrelenting wind, sleet, and hail, nothing could deter me. Although my body kept moving through this tunnel vision, my judgment capability eventually wore thin. Life-threatening accidents occurred all around me. Gas leaks, grease fires, scalding wax, poisonous fumes, and electric shock cloaked my every move. Praying for my safeguard, longing for the end, I persevered for 36 straight hours in the face of innumerable gauntlets and setbacks until the second and third forms were complete.

Driven in a state equivalent to madness, I rushed towards my end goal. Enlisting my father to help during the critical final hours, I woke him at dawn. Assigning consecutively more strenuous tasks, his work pace slowed down. As the time remaining before he needed to leave for work dwindled, I hastened his efforts. Unable to keep up, he was overcome by dizziness and tremors, nearly collapsing in exhaustion. Witnessing my father's acute physical distress through the bedroom window, my mother rushed to his assistance. Although I was much closer, only a few feet away inside the pool, I fought the instinctive urge to cease working and help. Fearing for my father's life, I trembled forward, never stopping once. After several minutes he recovered sufficiently enough to convince my mother to drive him to work rather than to the hospital. Distraught over the wellbeing of both my father and me, my mother left me to finish what I started.

Finishing a half hour later on Tuesday, ten a.m., I immediately phone my father to verify his stability and sing of my victory. Expecting that though the town would arrive at any moment, I immediately demolished my setup over the next twelve hours under constant heavy rain. I could barely lift my limbs by the end but the satisfaction of

victory kept my body moving. When the rigging was finally torn down and all my equipment put away, I was speechless. Overjoyed and exhausted, I was unable to fathom what I accomplished and to what ends I traveled to make this work.

Not until several days later when watching footage compiled from these events with my fellow peers could I fully appreciate my efforts. The video alone evoked the raw, unrelenting persistence personified only by madmen and artists. To successfully convey the strength of my commitment made everything worthwhile. The intensity of their immediate response made the decision for me; this footage simply must be shown. Withholding it was an injustice to my audience and myself.

Over the next three weeks, I dedicated countless hours to reviewing and editing my videos. Dedicated to eek every last drop of richness from my high-definition backyard footage, and preserve the pristine clarity of my lab footage, I succeeded in creating Blu-ray discs that upheld the original video quality. In retrospect, the forced premature end to my backyard experiments was a blessing. If it never transpired, I would have spent every last minute completing more forms. Instead this newfound window of time afforded a moment to reflect and enabled the creation of this critical third piece.

Organizing the videos and residues, I created a concise installation for the *MFA Thesis Group Exhibition*. Rather than trying to integrate the video and the residues in effort to resolve their competing energies, I displayed them as separate pieces. The three wax residues were positioned adjacently, visually joining them to one another. This grouping was set between two wall-mounted monitors displaying the video works (figures 11a, 11b, 11c, 11d). Using monitors as opposed to projectors sustained the crispness and contrast of my work within a brightly lit gallery space. Additionally, the

monitor's relatively small scale restricted them from overpowering the residues. The first monitor displayed the raw backyard documentation, offering the viewer insight into my creative process. The lab footage was shown on the second monitor, exploring the intricacies of the material transformation beyond the visible.

While my explorations were highly regarded by faculty and peers, the critique focused largely on my formal decisions. Regarding the display of residues, although unadorned and straightforwardly presented, they were still organized in an aesthetic S-formation. Defending this placement as an effort to create a visual flow between them while maximizing their impact, I recognized that this arrangement was not a true representation of their original formation. Perhaps a better solution was spacing them out so they read more accurately as individual events.

In response to the videos, although the richness of color and clarity offered by the monitors was acknowledged, many thought a large-scale projection would have been more effective, even if it sacrificed the vibrancy of the pieces. In defense, I explained that the close viewing distances demanded by the monitors were intended to define boundaries between the works. However, I acknowledged that they were not the ideal solution. The separation they provided was insufficient; given the proximity of the three pieces, the installation read as a triptych that was loosely connected. Each individual piece could function more successfully if displayed in separate rooms, perhaps even separate gallery locations.

## Conclusion

Given time to reflect on this body of work, I now understand that the core of my practice resides within the epic undertakings to redefine how art is made. Historically, groundbreaking figures were those courageous enough to act on faith alone. Abraham, the father of faith, did not question his commitment to a higher order. Traveling alongside Isaac slowly but steadily for three days, he carried the weight of the most difficult task imaginable. Finally reaching Mount Moriah, he enlisted Isaac to prepare the sacrificial pyre. When the time came to slay his most beloved son, Abraham drew the knife. Stopped by the hand of God, completing the act was unnecessary. The journey alone fulfilled the ultimate purpose of proving his faith. Through this lens, the significance of my residues can be equated to the life of Isaac. Not devoid of meaning, but unnecessary in validating the enormity of my path towards their creation.

Another relevant historical example of man becoming a true knight of faith resides in the book of Exodus. In the story of Moses leading his people out of their bondage in Egypt, he is commanded to do so by God. Reluctant to accept the “impossible” task of convincing Pharaoh to free the Israelites, Moses confessed his doubts, pleading to God with great humility.

<sup>10</sup> ‘Please O Lord, I have never been a man of words, either in times past or now that you have spoken to your servant. I am slow of speech and slow of tongue.’

<sup>11</sup>And the Lord said to him, ‘Who gives man speech? Who makes him dumb or deaf, or blind? Is it not I, the Lord? Now go, and I will be with you as you speak and I will tell you what to say.’ <sup>21</sup>And the Lord said to Moses, ‘When you return to Egypt, see that you perform before Pharaoh all the marvels I have put within your power.’ (Exodus 4.10).

Going forth as a mediator of God’s forces, Moses succeeded in leading the Israelites away from Egypt. But God hardened Pharaoh’s heart, forcing him to try and recapture his slaves. During their treacherous journey through the wilderness, the Israelites lost their faith in Moses and in God many times. They favored their familiar torturous existence under Egyptian bondage to the unknown impending death awaiting them in the wilderness. They did not possess the courage to make the necessary movements, risking everything to live as a free people. But through God’s will, Moses kept them on the path. When they reached the red sea, with the Egyptians following close at hand, Moses again looked to God for the strength to continue.

<sup>15</sup>Then the Lord said to Moses, ‘Why do you cry out to me? Tell the Israelites to go forward. <sup>16</sup>And you lift up your rod and hold out your arm over the sea and split it, so that the Israelites may march into the sea on dry ground. <sup>21</sup>The waters were split, <sup>22</sup>and the Israelites went into the sea on dry ground, the waters forming a wall for them on their right and on their left.’ (Exodus 14.19).

Departing from traditional methodologies of art making, I reconfigure the act of creating objects. Rather than exuding force upon matter with a concrete expectation of the result, my focus shifts to the dynamic exchange of particles. This migration of powers from the artist’s hand to the universal flow of energy allows me to exist in



between thresholds. Emphasizing the action above the results, I relinquish control of the outcome.

Making these movements towards faith, I conjure the strength to complete a mythic undertaking. Exiling myself from society in the process, I make certain to retain a deep connection with my family. Relying on them for room and board allowed me to dedicate every last dime towards my goal. Unafraid to bankrupt myself many times, I invested over twenty thousand dollars in realizing this dream. Without their support (financially and emotionally), I could not achieve these impossible feats. Along the way when lost in self-doubts, they helped me return to my path towards truth.

“Doubt is the key to the door of knowledge; it is the servant of discovery. Doubt is the touchstone of truth; it is an acid which eats away the false. Let none fear for the truth, that doubt may consume it; for doubt is a testing of belief. For truth, if it be truth, arises from each testing stronger, more secure. Those who would silence doubt are filled with fear; the house of their spirit is built on shifting sands. But they that fear not doubt, and know its use, are founded on a rock. They shall walk in the light of growing knowledge; the work of their hands shall endure. Therefore, let us not fear doubt, but let us rejoice in its help: It is to the wise as a staff to the blind; doubt is the handmaiden of truth.  
(*Meditation*, Gates of Prayer, p. 711)

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*\*This image is in the **public domain** because it contains materials that originally came from the U.S. National Oceanic and Atmospheric Administration, taken or made during the course of an employee's official duties.*

Appendix

Figure 1a: *pillow lava*, 2011.



Figure 1b, *wax extrusion*, 2011.



Figure 2. *becoming other*, 2010.

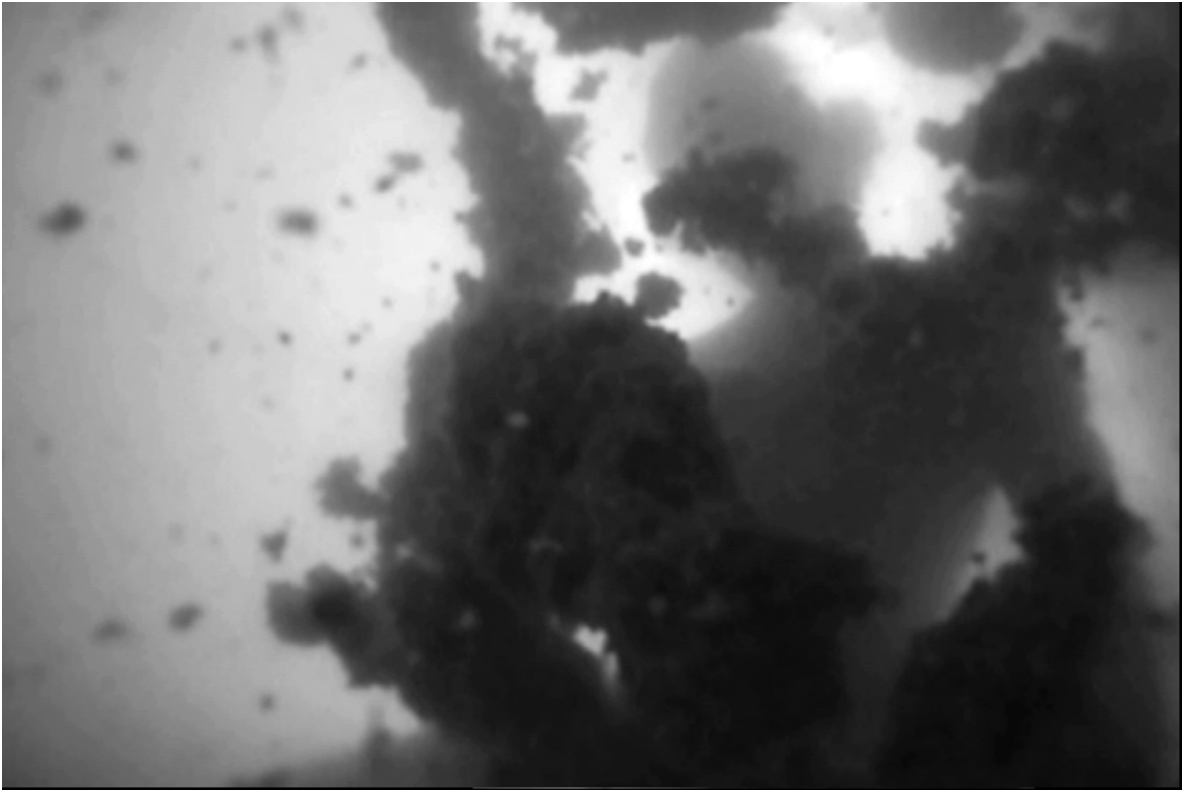


Figure 3a



Figure 3b

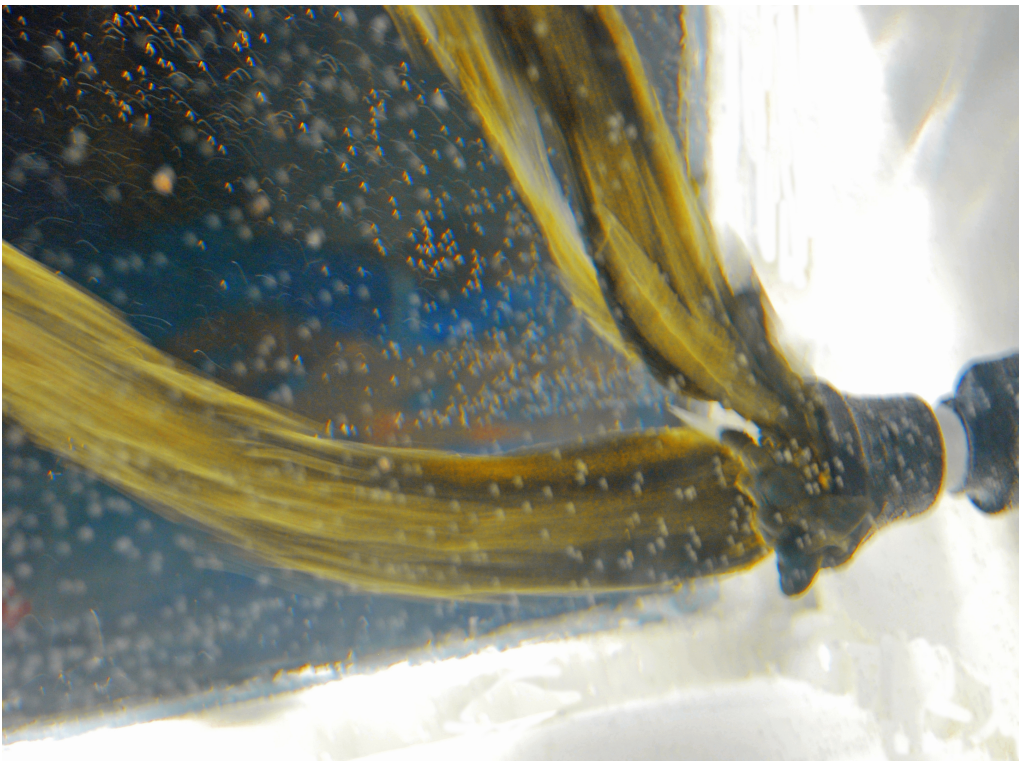


Figure 4: *Systems*, 2009.



Figure 5a: *Changing Phases*, 2009.



Figure 5b. *Changing Phases*, (projection detail), 2009.

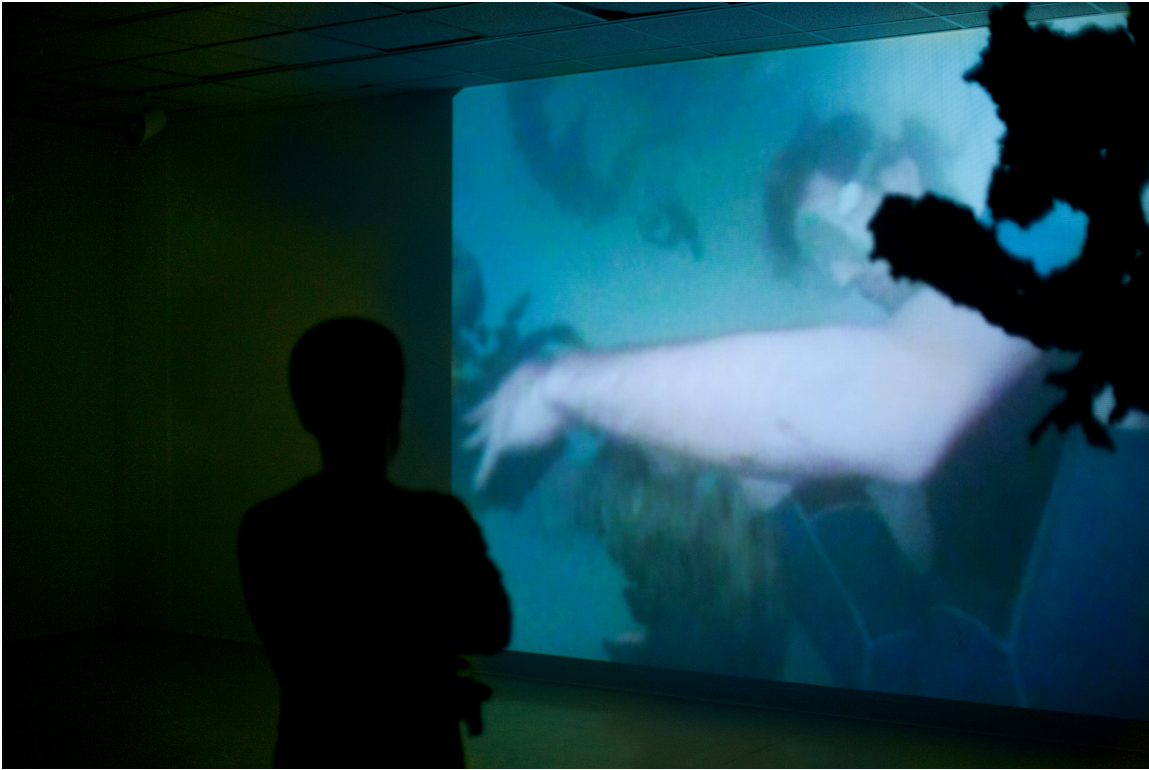


Figure 5c. *Changing Phases*, (phosphorescence detail), 2009.

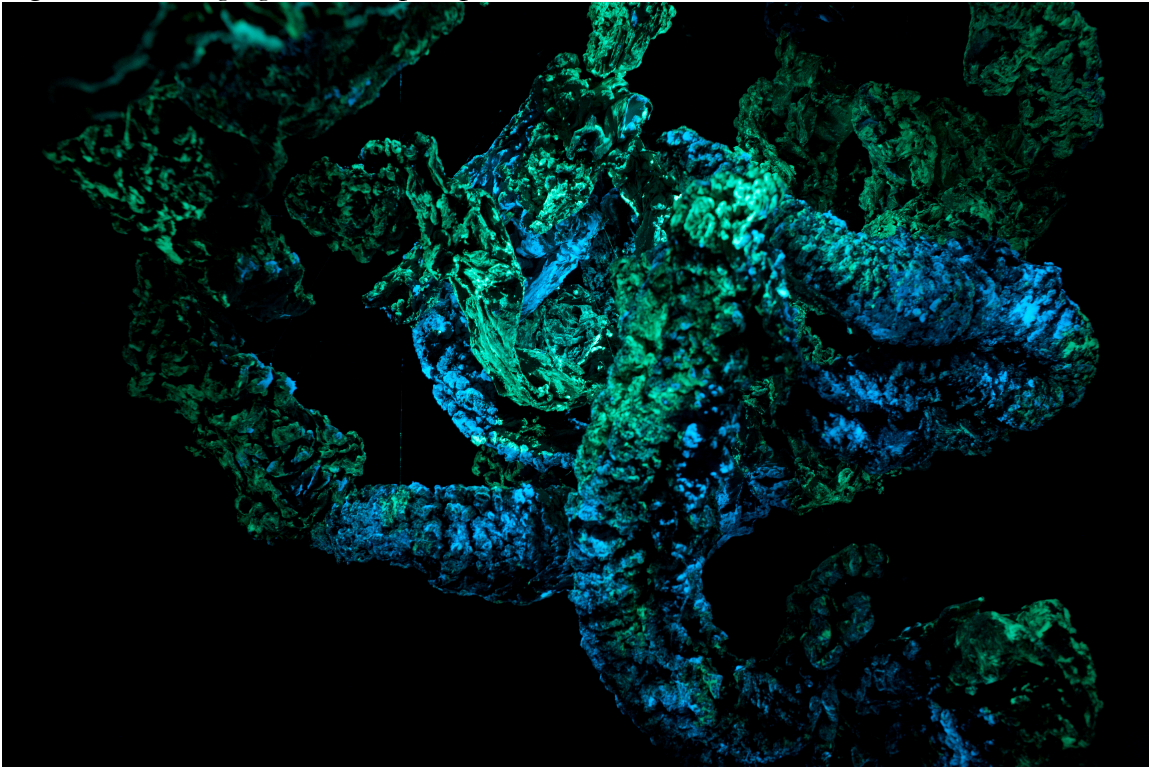


Figure 6a. *55 gallon extrusion rig with work deck*, 2010.





Figure 6b.



Figure 6c

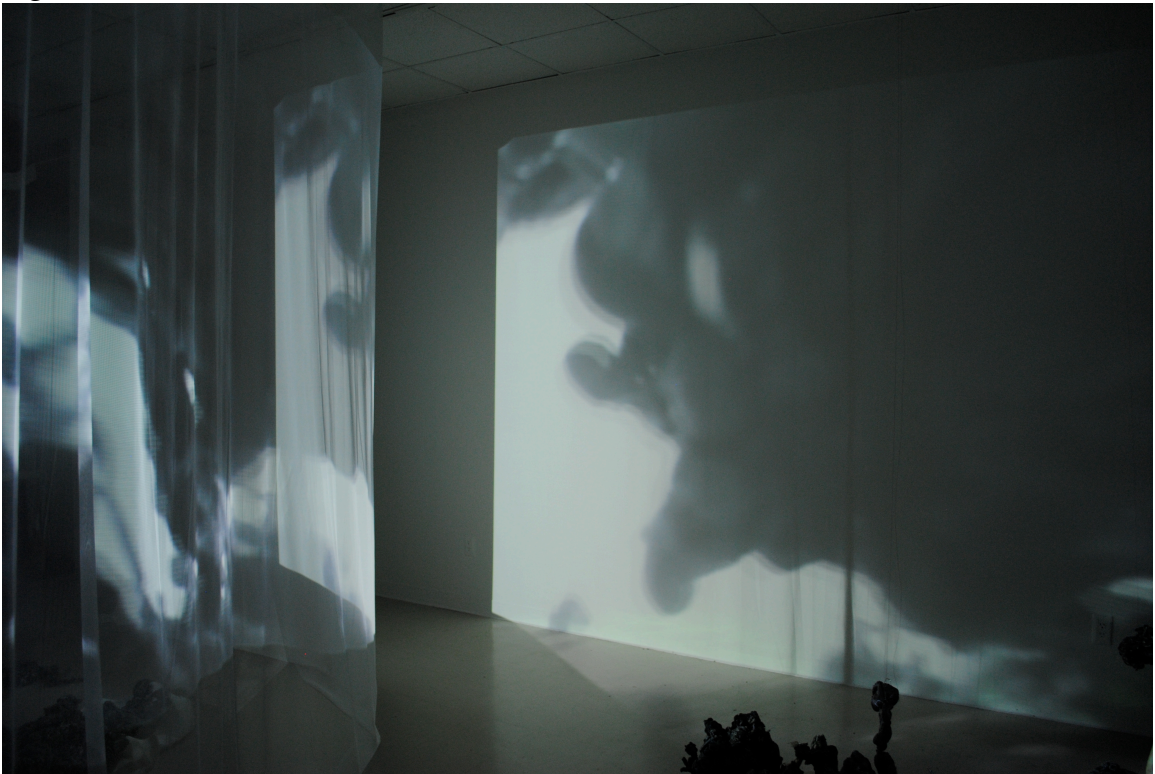


Figure 7a: *Thesis Rig*, 2011.



Figure 7b. *Copper Manifold Pool Heater*, 2011.



Figure 8a. *Thesis extrusions* (video sequence), 2011.

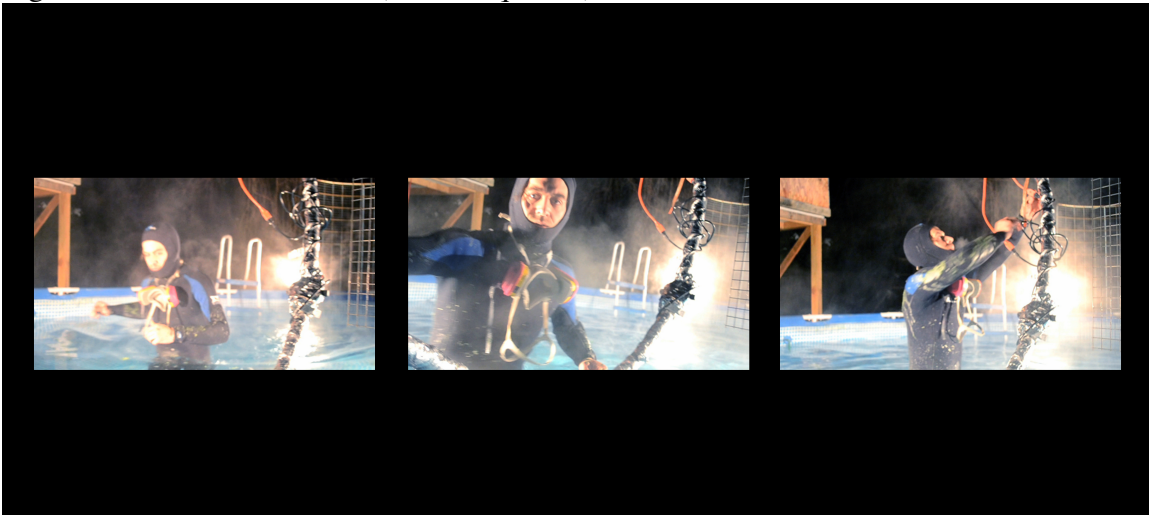


Figure 8b. *Thesis extrusions* (video sequence), 2011.

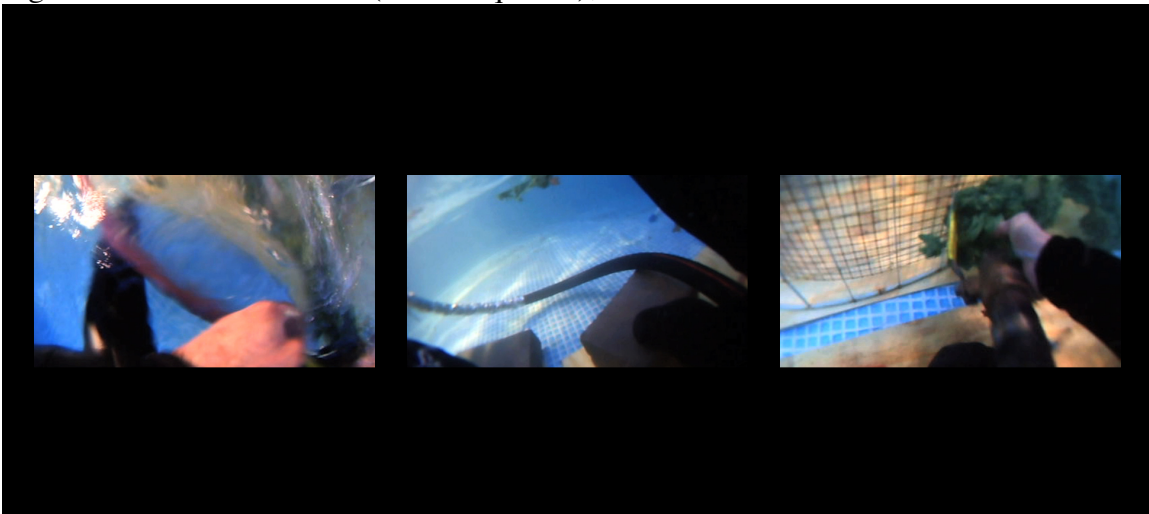


Figure 8c. *Thesis extrusions* (video sequence), 2011.

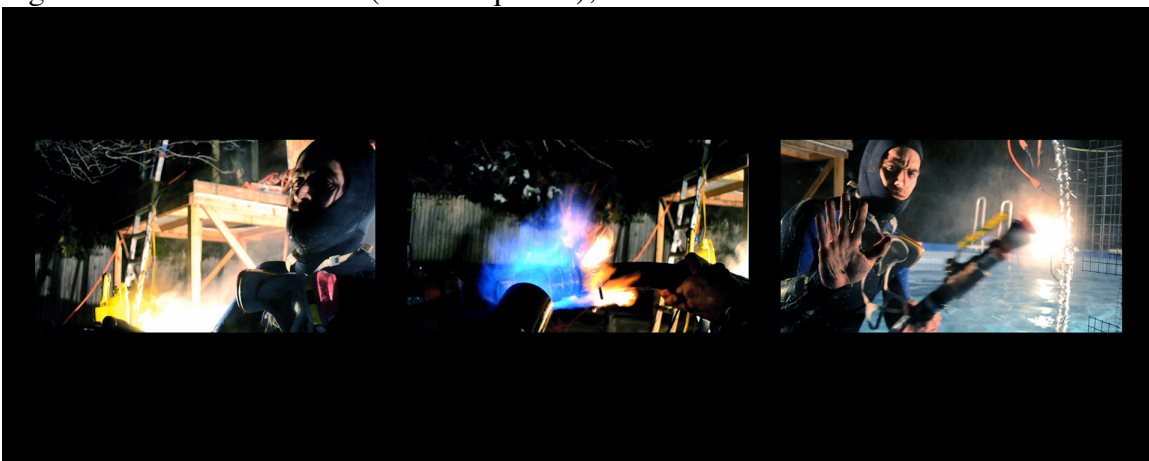


Figure 9a. *miniature wax extrusion, 2000 frames per second, 2011.*



Figure 9b. *miniature wax extrusion, 2000 frames per second, 2011.*

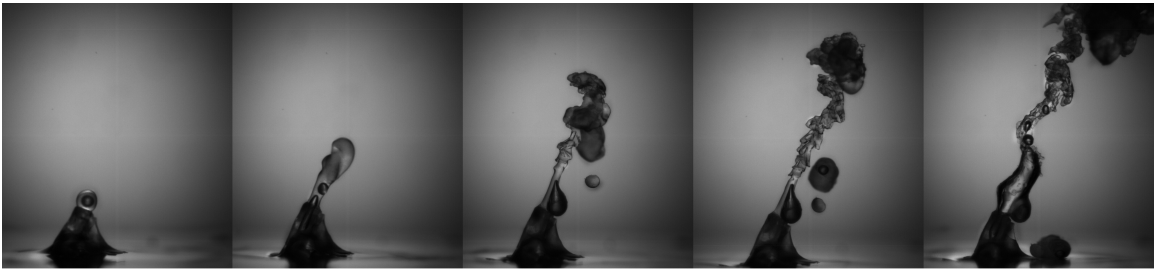


Figure 9c. *miniature wax extrusion, 2000 frames per second, 2011.*

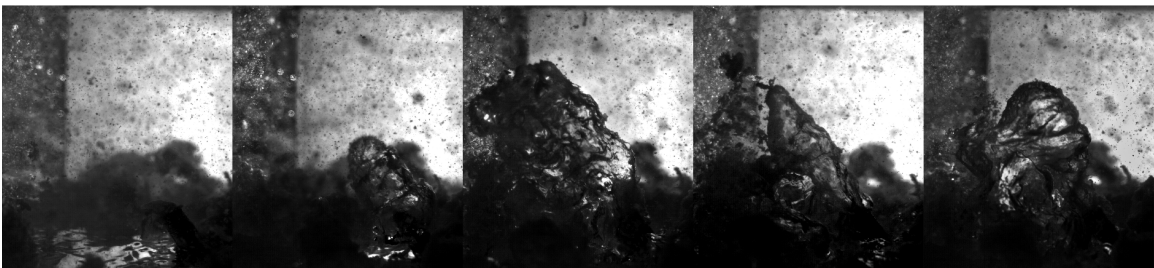


Figure 10a . *Fire Chief and Police at Residence, 2011.*



Figure 10b. *Fire Chief and Police at Residence, 2011.*



Figure 11a. *MFA Thesis Exhibition, 2011.*

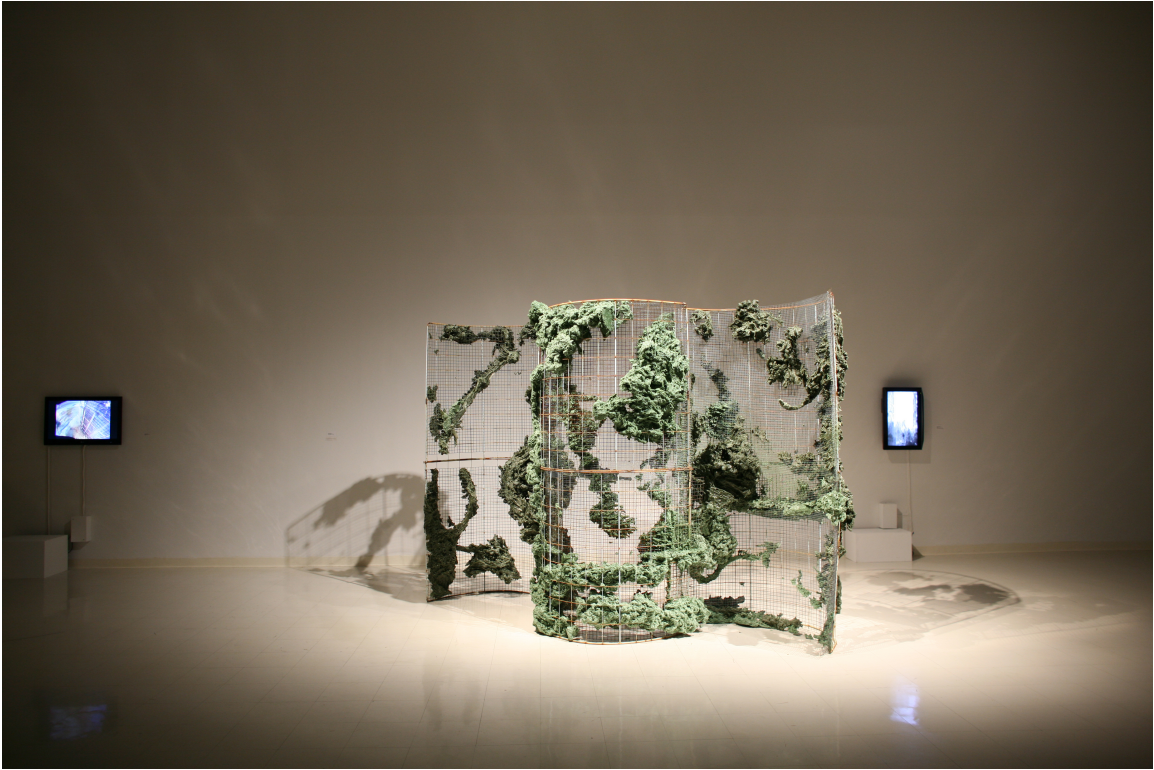


Figure 11b. *MFA Thesis Exhibition, 2011.*



Figure 11c. *MFA Thesis Exhibition, 2011.*



Figure 11d. *MFA Thesis Exhibition, 2011.*

