

ABSTRACT

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Directed By: John Ruppert, Full Professor. Department Chair,
Department of Art.

This body of work is comprised of three untitled works made from mixed media and sail fabric. The work touches on issues of recent reliance on technology, the re-establishment of place. As a secondary function, the works explore the idea of personal space, as well as the willingness of the gallery patron to participate in art rather than observe. Through interactive media, durable items and the open invitation to touch, the pieces are meant to create an active exchange of aesthetic principles between the viewer and artist. In this dialogue, traditional roles are interchangeable, and the work is incomplete without active participation and consideration of both parties.

The work is built locally, utilizing materials not exclusive to, but inherent in the culture of Maryland and the Chesapeake Bay. The materials are used in a manner that stays true to locale and purpose, while pushing the boundaries in which material, intention, and method coexist.

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By

Christian Litty Benefiel

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Advisory Committee:
Professor John Ruppert, Chair
John McCarty
Dawn Gavin
Foon Sham
Brandon Morse
W. C. Richardson

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Preface

The inspiration for this body of work can be traced back as far as I can remember.

When I was born my father worked in a marina, above which my family had an apartment. As a toddler, I spent weekends with my father, sailing a small catamaran out around Baltimore Light, identifying the different types of boats along the way. At some point I learned about the force of lift, and its application to flight and modern sailing. The sail became a sort of mythical object for me, rich in history, infinitely variable, and yet elegant in its simplicity.

I have wanted to use sailcloth for several years, but until recently had not found an application that I felt was worth pursuing. Two years ago, my work took a turn from traditional iron, wood, and steel sculpture a more interactive motif. I wanted to make work that could be touched, work that, indeed, had to be touched in order to be fully understood.

Dedication

To you.

Table of Contents

Preface.....	ii
Dedication.....	iii
Table of Contents.....	iv
The Fourth Wall.....	1
Personal Space	4
Passive and Active	6
The Importance of the Handmade.....	8
Location And Materials	10
Closing.....	12
Appendix.....	13
Images.....	17

The Fourth Wall

It is in our nature to adhere to what is understood, to appreciate what is relative to our own lives. It is apparent in so many forms, from things as abstract as the fear of death, to the popularity of banal minutia pedaled as entertainment in reality television.

Surround sound, High Definition, massively multiplayer role playing games, each one a device to make things seem real, to make one feel as if they are really there, part of the action, an active participant rather than a fly on the wall.

As the activation of sense in the visual arts becomes less and less about visuals, and the world of high definition, surround sound, blue ray, blue tooth, interactive wireless interface, home theater, Ipods, Digital animation, netflix, youtube, movies ondemand, IMAX, Satellite television, HD radio, gives a thousand other reasons not to leave the couch, complacency gets easier and easier. What was once entertainment becomes decoration. The visual aspects of any artwork are readily available with a few keystrokes on Google. As a result, there are fewer and fewer reasons for the average citizen to see artworks in person, other than general appreciation. By involving the viewer and giving control, the work creates a more intimate experience with the art, artist and viewer, and essentially attaches someone to what would otherwise be an inanimate object.

Removing the implied vestibule around the traditional gallery object counters the alienation brought on by the sterile environment of the gallery space. "Yes these

pieces were made for you, in fact, they are worthless without you." In these pieces in particular, the fact that the viewer breathes life into the work alludes to a relationship of nurture, a solicitous concern for the condition of what one has taken part in the creation of. It is the desire to have an effect, and the cycle of inflation and deflation, referencing the rise and fall of the respiratory cycle, which influences the interaction. Though there is never full creative jurisdiction, the control over collapse and resuscitation creates a subtle connection with the viewer.

And so the observer plays a critical role in these pieces, without them, the piece is really just a pile of material and somewhat simple wiring. Where exactly the operator comes into play, and how, affect not only the pieces and the forms that they take, but the very environment they and the participants share. The viewer must make choices about the level of involvement that they have, and those decisions will ultimately control the outcome of the work. And yet, there is never complete control, as any number of persons might have a different impact as one alone. Several interfaces control the volume and mass of the pieces, some voluntary and others involuntary.

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These interfaces are designed to incorporate more than the gallery goer's physical presence, incorporating his/her will and action into the design of the work. Essentially the viewer becomes more than a finger operating a light switch which inevitably turns

off. As someone enters the space they are faced with decisions, explore or ignore? To activate or disengage the work, move or become overwhelmed. Although the systems and their effects are not difficult to understand, it is the option to continue working with the sculpture and environment which is intended to stimulate ones curiosity.

Personal Space

The idea of personal space is confronted in this body of work through the same mode or human interaction. In each piece, the work begins innocuously laid out on the ground, harmless and non-invasive. As the cycle of the work progresses the pieces grow and consume more space, meanwhile rising to an imposing height, and pressing out against other occupants in the area. The environment becomes more and more crowded. A slight feeling of claustrophobia may settle in, combined with intrigue and expectation. The sound of the blower running, loud and industrial, disturbs the tranquility. The scale of the work is a bit disorienting at first glance. The surface of the work tenses, fabric strains against the machine and gravity. At any point it seems possible that the orbs may rupture, releasing chaos into the space. The tension created by the force of air pushing on the walls, looking for an escape, and the relentless force of the machine become a force of influence on the participants.

At this point, the viewer makes a choice, continues to interact with the work or walk away, leaving the piece to its own devices. The decision is made based on one's personal level of comfort. The curiosity, which first engages the viewer gives way to the degree of tolerance of sound, volume, shape, and scale that the viewer finds in him/herself as the work inflates. There is the option to allow the piece to continue its growth or allow it to settle, trading interactivity for intimidation.

But are these choices incidental? Is this interaction all one sided? Are viewers leaving the sculpture based on an invasion of privacy, cramped space, or threatening imposition? Is the sculpture declaring its own space? In many ways the work

inevitably overpowers its enablers, threatening to topple, collapse, or oust the would-be viewer from the space. In the case of the more mobile sculptures the changes in orientation and position add to the idea of art chasing away appreciates. Upon the exit of the viewer, the work may resume its calm, return to stasis. It recaptures the space that it originally occupied. The viewer can control this ebb and flow of the work, to manipulate the shapes of various works, to suit aesthetic desires and ideas of spatial balance. The sculpture and viewer form a symbiotic relationship that is central to the piece.

Passive and Active

In all of these pieces, the cyclical method in which they inflate and deflate reflects on the activity of the participant. This cycle, though only to be set off when one approaches and intervenes in the static calm, references the Taoist principles of balance, force (Tao), and the struggle between passive and aggressive action.

The balance of form, precision set off by imperfection, the simple made complex and vice versa are instantly apparent upon activation of the pieces. As the work comes to life, a pattern arises, not overly bold, but obvious in its intentions. The triangle and the circle, two elementary geometric shapes, are combined and multiplied. The multiplicity, again though elegant in its individual aesthetic becomes moot upon viewing the piece as a whole and appreciating its basic reference to the sphere. This is how the simple arises and dominates the complex, allowing balance to overcome what seems like orchestrated chaos and disorder.

The force of the approach, though intimidating on first impact, becomes necessary in order to fully appreciate the silence. The pieces seem to come to peaceful rest, in stark contrast to the assertive loud happenings of electric power. In the same way that work is required to enjoy the fruits of labor, the sound and action is vital to the calm and settling scene. The blower alludes to the idea of chi, an inner force that can provide great strength, but must be released periodically to maintain balance in the soul. The cyclical currents inside of the pieces reflect this inner chi. These currents are what shape the sculpture. They are what controls size, orientation and form in the

piece. Air, in all its delicacy, is the driving force behind this work. It penetrates, mustering great force through harnessing an otherwise inert substance. In the end this force is subdued, calmed by the absence of action on the part of the viewer. The wu wei. The art of doing nothing. As the weight of the fabric and iron begin to pull and down on the fabric. The once powerful air pressure, now static, is overcome by gravity. In the same way that a rock will split a stream, the force of air threatens to split the seams of these sculptures, and yet in the same manner that the stream erodes and rounds the stone, until it is no longer breaking over it, the weight and confines of the work eventually overcome the force of the air. The work gently deflates on its own accord, regardless of how much air is forced into the work. The overcoming of this synthetic force is in and of itself as poetic and beautiful, if not more so, than the act of inflation.

The constant struggle between passive and aggressive is complemented again by the refusal of the work to activate without the presence of an operator. Art begs the question asked about the tree falling in the forest without someone there to hear it. It only reaches its fullest existence in the perception of the viewer. Without interpretation, and appreciation, art becomes decoration. Communication between artist and viewer, through the work of art, is essential. These works take this idea one step further, requiring the viewer to not simply appreciate and observe, but to interact and create. Without this action on behalf of the viewer, the work is static and lives a half-life, where it may exist in physical being, but the existential aspects never come to fruition.

The Importance of the Handmade

The mathematics involved in defining the shapes is complex, despite the seemingly simple forms, which they produce. The measurements for cutting and stitching the fabric can be roughly plotted out using conical formulas and graphic algebra. The actual computation is relatively simple, yet tedious to repeat over and over for the shape and size of each piece desired. To assist in this endeavor, digital 3D modeling programs have been used to develop shape and size, and have yielded templates, which can be transferred onto the sail fabric and cut precisely and sewn together using an alternative jig, to yield perfect exact results in each form.

But should they be? Is the idea of handmade object becoming obsolete? Disney doesn't draw their animated movies anymore; architects are making fewer and fewer watercolor elevations, perspectives or floor plans, and even fewer blueprints. The Postal Service is considering cutting mail delivery back to five days per week, because fewer and fewer people are writing letters. As the world forges into the brave new world of digital convenience and e-life/ i-living, it seems to get, ironically, smaller and yet more distant at the same time. A person can conduct business, play music, or speak face to face with someone on the other side of the world, and never have any reason to meet them in person. While these innovations make life relatively convenient, they may dull the ability to interact on a personal level.

This body of work may be conceived digitally, but the work of the hand is apparent in every stitch, slice and splice. They are created physically without measure, and stitched without any guide further than a drawn line. There is no attempt to cover the

work of the artist's hand. While they seem calculated from afar, a closer inspection reveals these guides, markings and stitches that are stretched and slipped to accommodate the form. What may seem like imperfections in the manufacturing, serve to reinforce the importance of the artists input and handwork in the creation of the final form. Electronics are hand wired, elements hand stitched, frameworks handmade, and ballasts modeled, cast and finished with traditional tools.

More importantly, the viewer is invited to see, hear and inevitably touch these various elements. Follow the straight lines and see where they stray from their paths, feel the air coming from the work, interact by doing, and in doing, appreciate what others have done before you. This tactile interaction forces an interpersonal interaction between artist and artwork, viewer and artist, and most importantly viewer and viewer. The work is to be manipulated and changed, not once, but over and over, by multiple people together. This is the dialogue that needs to be opened in this work. The co-operative effort at least inspires a sense of mutual accomplishment through personal interaction.

Location And Materials

The sail is one of the oldest means of conveyance, and has been revered for its brilliance and simplicity by poets, songwriters, artists, explorers and countless other cornerstones of society. As time has passed and innovation has overcome the industry, using many of the same digital design interfaces as other industries, the sail is exceptional in the fact that even as digital design develops further and further, the products, are still produced largely by hand. Sewn in the same loft style factories for generations, each sail itself was the work of an artisan.

Along with innovation came cheaper, more durable, stronger, lighter material, often introduced by the Dupont Chemical Corporation. These materials such as Kevlar, carbon fiber, Dacron, Nylon and Mylar have made the canvas obsolete. New thermoplastic materials have made the industry faster and lighter, as well as stronger and more resistant to water. The drawback is that these materials degrade quicker through motion and exposure to the elements. As a result, sail fabric is often discarded once stripped of its metal parts, rather than recycled or repaired.

Maryland, and its capital Annapolis, often presents itself as the sailing capital of the world. As a result, this area in particular often finds itself beleaguered with sailing merchandise, paraphernalia and enthusiasts. Sail fabric, being both familiar and readily available in the area, presents itself as a media which can be used with appreciation in the area, but hast to be used in an innovative way to avoid becoming

to kitschy. The nature and history of the material lend themselves quickly to the idea of kinetic works, due both to their physical properties and the cultural significance of their intended use. Without bordering too much on cliché, inflatable work forms a balance between the obvious and the sublime. There subtle is a subtle irony in using them in this manner. Although often obscured by the shape and actions of the work, the material and its irony form a small but integral part of the work.

Closing

Through this cooperation of themes, the body of work presented strives to inspire curiosity, and pique the interest of the viewer. The idea is not to fight the conventional sense of singularity and personal obsession traditionally associated with the gallery space. Rather, the pieces place the personal objectives, and desires of willing participants in public. Because the work simultaneously invites interaction and limits control, it can, in a sense, never be permanently claimed or preserved. The sculptures are dependent on the interaction of the viewer and artist, without which the essence of the pieces are lost. The space is constantly flooded in a cycle of domination and submission, where the work inspires and is inspired by interaction. In the most successful scenario, the artist, sculpture and participant open a dialogue where lines and shapes blur, the environment is changed at the will of a whim and to merely see is to miss the point.

Appendix

Process

In the making of this work, the process uses both old and new technologies, traditional materials and methods, combined with unconventional practices. In order to make a consistent body of work, I start each piece with hand drawings. Often the material is predetermined, so the majority of time spent with paper and pencil is figuring out the best use for each particular sail, or combination of sails. Once the drawing is complete, the work goes into a 3d modeling program to be built virtually.

Using the program to create and adjust curves, the forms are built as a wire frame model first. Next, the curves are used to create a developable surface over the wire frame model. Because the material we are using is essentially two dimensional, we have to make our shapes comprised of a two-dimensional shape as well.

Unfortunately, it is impossible to define a round shape from flat surfaces without distortion. A true round shape is comprised of what we call complex curves, or curves with multiple orientations. In the surface of a typical ellipsoid, there are curves which theoretically run in infinite directions, but for the sake of simplicity, we consider the three directions of x, y, and z, respective to a Cartesian space. The surfaces are defined by using curved slices known as gores. In the early stages of this project, the shapes of the curves were done longhand using a combination of calculus, algebra, simple trigonometry and a several conic equations. This method, though interesting in

its design, did not give exact dimensions, nor is it adaptable to multiple shapes or sizes. In order to work with a variety of shapes, the formulas must be re worked and recalculated for each variable which is changed. The formulas are often similar to formulas applied to common materials such as athletic equipment. The soccer ball is based on mathematics laid out by mathematician Buckminster Fuller. A baseball cap is composed of six triangular sections, and an American football is an ellipsoid comprised of four almond shaped gores. Perhaps less common applications for this type of mathematics are fabric patterns in sails, hot air balloons, and parachutes. Even the steel shapes used in the construction of water towers, containers, buoys, and the hulls of ships are based on similar patterns. The latter of these examples are often designed and built using computers to define the shape of the steel pieces to be welded together. The programs allow for infinite precision that is unattainable with manual calculation.

Another useful purpose of the CAD program is a combination of efficiency, and flexibility. By allowing the computer to perform most of the math, the form can be manipulated without time spent recalculating. At the same time, the program shows what effects changes in the mathematics will have on the overall form.

Once the models have been built and the surfaces applied to the wire frame model, the program also allows patterns to be created by unrolling sections of the surface from the model. These surfaces are unrolled from the form and defined as developable two-dimensional shapes. The files for the shapes of the surface are transferred at scale from a 3 dimensional file to a two-dimensional vector based drawing file. This is usually done using either architectural programs such as Auto

CAD or vector based Adobe Illustrator. While both programs allow for maintaining the scale of the drawings done life size with the 3-d programs. Illustrator is generally easier to use, and allows for the combination of patterns for economical printing. The advantage to keeping a file in Auto CAD is that it allows for real dimension resizing, that is to say that in CAD, as one element of a sculpture is resized, the program feeds information about how the changes affect the remaining elements in the piece. The drawings are then printed as line drawings at actual scale, to be used as templates, using a digital plotter/printer.

These templates are cut out and marked to label the shape, section and dimensions of the shape they are a part of. For the sake of consistency, and durability, the shapes are traced onto a heavy board such as Masonite, MDF, Luan plywood, or OSB. The added weight of these panels offer consistent shape and durability to function as a multiple use template, but also forces the material to remain flat while the shape is copied. These templates are traced and cut into swatches according to the size and number of sections in the shapes.

The swatches of fabric are cut from recycled sail material, in the case of these sculptures, either Dacron, Nylon or a Kevlar/Mylar laminate. Each material has its own sets of properties. Because most of the products are made from thermoplastic materials, they are best cut with heat, so as to reseal frayed edges as the material is cut. As the material is cut out, the pieces are laid out and attached using a thin double-sided Mylar tape, known as basting tape. This tape helps to reduce puckering as well as create a more airtight seal along the seams. In the case of laminate materials, a different type of tape is required. The frailty of the Mylar used in the initial factory

lamination makes straight sewing this material fruitless. Mylar is easily ripped and the Kevlar weave pattern is relatively loose, giving the fabric its signature transparency. The combination of these traits often leads to tearing seams in a sewn laminate material. To combat this problem, sail rites have come up with a special basting tape made of high strength Dacron Canvas for laminate sails. This tape holds the fabric together for stitching, but also provides a tightly woven layer of material to stop a running split seam.

The pieces of material are sewn together one by one to create a gore based pattern, defining either a round or geometric faceted form. The works have brass grommets installed to act as both anchor points for the work and vents to avoid over inflation. Velcro is used to create a sort of service hatch in the side of these particular pieces, to aid in the installation. Each piece is given the separate elements that make it unique, automation, weights, or resistance. Weights control and work against the lightweight nylon fabric, as well as controlling the orientation for the Kevlar pieces.

A blower port is attached to the side of the pieces, and blowers are attached to an automated electrical system. The systems for these pieces are built using a switch and relay to control the rate of inflation or deflation in the pieces. Once installed, these switches allow for interactive involvement between the viewer and the sculpture.

The pieces are installed and soft wired into the galleries electrical system and the lights go up.

Images



Image 01
2008, Dacron, Motion Sensor, Blower Unit and Mixed Media
Dimensions Variable.



Image 02
Kevlar, Mylar, Cast Iron, Motion Detector, Mixed Media
Dimensions Variable



Image 3
2008 Nylon, Cast Iron, Pushbutton Switch, Blower Unit, Shock Cord and Mixed
Media
Dimensions Variable.



Image 4
Manipulation of work by viewer.