

# Drawing Attention

A Thesis Submitted to the Faculty of the Painting Department  
in Partial Fulfillment of the Requirements for the  
Degree of Masters of Fine Art in Painting  
Savannah College of Art and Design

by

**Marcia Alice Dietz**

Atlanta, Georgia

May 2013

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## Marcia A Dietz

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For the Degree of Master of Fine Arts in Painting  
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\_\_\_\_\_/\_\_\_\_/\_\_\_\_  
Marcia A Dietz (Sign here) (Date here)  
Author

\_\_\_\_\_/\_\_\_\_/\_\_\_\_  
Professor Michael Vincent Brown (Sign here) (Date here)  
Committee Chair

\_\_\_\_\_/\_\_\_\_/\_\_\_\_  
Professor Jo Peterson (Sign here) (Date here)  
Committee Member

\_\_\_\_\_/\_\_\_\_/\_\_\_\_  
Professor Cynthia Lollis (Sign here) (Date here)  
Committee Member



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<http://www.graniteroom.com>

The Grannite Room  
211 Peters Street  
Atlanta, Georgia

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<http://www.maldonadocarlos.com>

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<http://www.ajsigns.com>

AJ Signs  
842 NY 50  
Burnt Hills, NY 12027

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[www.pgprint.com](http://www.pgprint.com)

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## **Editors:**

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# Dedication

A special thank you to the faculty and fellow students at SCAD. All of you created a supportive creative environment to succeed, especially my thesis committee.

Thank you to my family who tolerated missing mom, motors, and many meals.

Finally to my husband Scott Dietz, who encouraged me to start and supported me every step of the way.

Table of Contents

<b>I. ABSTRACT</b>	<b>1</b>
<b>II. DRAWING THE LINE</b>	<b>2</b>
<b>III. DRIVEN TO DRAW</b>	<b>3</b>
<b>IV. DRAWN TO PLEASE</b>	<b>6</b>
<b>V. DRAWING IN CIRCLES</b>	<b>7</b>
<b>VI. DRAWN TOGETHER</b>	<b>8</b>
<b>VII. DRAWN TO ABSTRACTION</b>	<b>9</b>
<b>VIII. DRAWING ATTENTION</b>	<b>10</b>
<b>IX. DRAWN OUT</b>	<b>11</b>
<b>X. DRAWN TO A CLOSE</b>	<b>12</b>
<b>XI. WORKS CITED</b>	<b>13</b>

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## I. Abstract

I believe day-to-day living is so tightly woven with technology that the thought of living off the land, technology free, is a fictitious impossibility. There is no clearly drawn line between technology and humanity. It is difficult to distinguish between the artist hand and the results of machine. The aesthetic of perfection no longer indicates time well spent by a skilled artist. It is more likely a computer-generated image. Creative expression needs to be exposed to make the work interesting and not the possible product of mass production. From the first spark of fire, through the Industrial Revolution, to the dawn of Modernism, humanity has looked to technology to improve every aspect of their lives. The thesis of this body of work investigates the connection between art, technology and humanity. With the aide of drawing robots, "Drawing Attention" not only produced memorable art but stimulate on going discourse.

## II. Drawing the Line

Interactive art, like its name, is art that connects with the viewer in a variety of ways. This direction of art rose in popularity in the early nineteen nineties, partly due as a response to the AIDS epidemic. The sudden morbid nature of this emerging disease created an outpouring from young artists. They saw the need for social understanding on a grand scale, as well as to advance people on a deeply personal individual level. Felix Gonzales Torres was one of the pioneers of interactive art. He created works that involved the viewer. Participants could take part by dancing among the lights to their own music or consuming a single piece of candy from a large pile. His works, among others, shifted the perception of art from post-modernistic attack on modernism, to a post-post-modern sensibility by drawing attention to the individual to change society. Conceptually, post-modernism searches for universal truths and relativism, by exploring the space between the extremes of human existence. Historically, art was intended to prepare and announce a future world; now, through interactive art, it is modeling possible universes.<sup>1</sup> The modern artist attempts to free humanity and usher in a better society set the stage for increased engagement of the viewer. Originating from the Dada movement, Happenings, a spontaneous type of performance art, sprang up in the 1960's and 70's. These Happenings were controlled by the artist and generally small in scale. A line still existed between the viewer and the work or performance. Artists, Joseph Beuys and Wolf Vostell, Robert

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<sup>1</sup> Bourriaud, Nicolas, *Relational Aesthetics*, Les presses du reel, 2002 p.13

Rauschenberg, Roy Lichtenstein, and Claus Oldenburg are examples of famous artists that presented Happenings.

Modern art tackled the issue of how technologies affected society. My drawing robots continue this thread by using today's technology and common household parts to create the work. Drawing robots are part of a materialistic tradition that can be seen as a microcosm of social dynamics and interaction. Empathy for the drawing robots, and a desire to play, draws the viewer into the work. This coerced interaction between art, and viewer, as well as between the viewers themselves produces a memorable experience. The investigation and integration of the viewer through art in totality is the goal of what the drawing robots create. By allowing the viewer to interact with the drawing robots, the final line between the viewer and the art is erased.

### III. Driven to Draw

Machine driven art works have a longer history than interactive art. Tracing back to an ancient Chinese cultural practice of creating machine driven props for their drama presentations. For an interesting overview of the history of drawing machines, we can take a look at contemporary artist, Pablo Garcia. He programmed one of the most recent drawing machines to draw the history of drawing machines. The Computer Numerical Controlled (CNC) drawing machine, unlike typical computer printers, draws on fine art paper using an ink pen. Pablo Garcia, a Pittsburg based artist, programmed his CNC machine to draw 12 historical drawing machines. Each drawing machine is recaptured in a traditional

illustrative technique, making them look like a historical record. The “MachineDrawing, DrawingMachines”<sup>2</sup> by Garcia is an interesting synopsis of the history and fascination of machines that can draw. (Figure 1)

Additional contemporary artists investigating drawing machines are Tristan Parish, Alan Storey, Eske Rex, Joseph Griffiths, and Fernando Orellana. These artists create an international sampling of machine driven drawing:

Tristan Perich's work is inspired by the aesthetic simplicity of math, physics and code. The “Machine Drawings”, pen on paper or wall drawings executed by a custom-built machine, use randomness and order as raw materials within a composition. Inspired by physics and math, the “Machine Drawings”, are a combination of the delicacy of real drawings and the rigid, structured system of mechanics, and code.<sup>3</sup> (Figure 2)

Canadian artist, Alan Storey, invented drawing machines for over 20 years. He is interested in recording human activity in line:

*"Part of the philosophy in my approach is that a work of art in the public realm should intrigue and engage a passerby into an exploratory investigation of the content and it's relationship to the surrounding site."*<sup>4</sup> (Figure 3)

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<sup>2</sup> Garcia, Pablo, Home page. [www.pablogarcia.org/projects/machinedrawing-drawingmachines](http://www.pablogarcia.org/projects/machinedrawing-drawingmachines). May. 2012

<sup>3</sup> Parish, Tristan. Home page. [www.tristanperish.com](http://www.tristanperish.com). May 2012

<sup>4</sup> Storey, Alan, Home page. [www.alanstorey.com](http://www.alanstorey.com) May 2012

Swedish artist, Eske Rex, creates huge drawing machines that work using uncomplicated dual pendulum mechanics. The pendulums are activated by hand, and produce elaborate multi-linear orbs. Each time the machine is activated it records using separate color ink. Changing the weight of the pendulum alter the drawings. The result is an original huge lacy drawing.<sup>5</sup> (Figure 4)

Joseph Griffiths is an Australian visual artist, who speaks of his work:

*"I make drawings and installations which explore my interests in nature, urbanism, folklore, technology, craft, and the relationship between creativity and survival."*

A drawing bicycle adds a sense of humor to his art. Contrary to how we think of modern technology, this drawing machine actually increases the work of the user.<sup>6</sup> (Figure 5)

Fernando Orellana's "Drawing Machine 3.1415926 v.2," explores the notion of generative art or art that makes art on its own. The piece consists of a three-tiered mobile sculpture driven by the vibration of a motor. This vibration is controlled in two ways: first by the machines programming, essentially a collection of instructions on how to draw, and secondly by monitoring one or two microphones, giving it the ability to "listen" to its environment. When it hears something loud enough it uses that information directly to create marks. In this way, the machine collaborates with the environment; sometimes using its program and sometimes using what it hears to make drawings.<sup>7</sup> (Figure 6)

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<sup>5</sup> Rex, Eske. Home page. [www.eskerex.com](http://www.eskerex.com). May 2012

<sup>6</sup> Griffiths, Joseph. Home page. [www.josephlgriffiths.com](http://www.josephlgriffiths.com). May 2012

<sup>7</sup> Orellana, Fernando. Home page. [www.fernandoorellana.com](http://www.fernandoorellana.com). May 2012

#### IV. Drawn to Please

I believe all types of energy follow the same physical laws, seen or un-seen.

Magnetism or marriage, electricity or emotions, can all be illustrated with physical laws. A simple example is paint flowing over an obstacle. It has only three choices: to over it, get stuck in it, or find a new direction. We have the same choices when we hit obstacles in life.

“Trying to Please” is a large 60 x 114 inch oil painting on canvas. (Figure 7)

It is the expression of painting roses, one after another, ad Infinitum, until exhausted. The painting process, like most long undertakings, began deliberate, focused and fresh then slowly fell apart with the progression of time. It depicts both physical and emotional energy running out over time. The depletion of my energy was the result of ‘trying to please’ everyone but me. Using the same concept and similar colors as “Trying to Please,” “Draw Two” was created completely using mark making robots. Interesting spiral marks in red and Prussian blue emerged as the small drawing robots moved about the paper dragging brushes, inks, water bottles, and sponge rollers. The 60 x 120 inch YUPO® painting was divided and mounted on two wooden panels. “Draw Two” is a sharp contemporary piece with enough visual strength to hold its own adjacent to “Trying to Please”. These two pieces are conceptually similar working until exhausted. It is my opinion that “Trying to Please” has stronger emotional power even though “Draw Two” is a dynamic work. This brings up questions of the importance of the artist's hand when creating emotional work. (Figure 8)

## V. Drawing in Circles

The tiny drawing robots that I make to produce random marks and are small enough to fit in the palm of your hand. Simply explained, they are constructed using vibrating motors from discarded electronics, (mainly cell phone buzzers) attaching them to button batteries and adding mark making media with clips or wires. Media such as pastel, graphite stick, and charcoal must be able to mark without the adding pressure. Each drawing robot is unique in appearance and the marks they make, mainly charcoal and graphite. The small drawing robots appear to be prototypes; parts stuck together with solder and melted plastic. Plastic is melted to create structure and form. This informal appearance invites interaction and informality. They set up an opportunity to play, observe, and interact with the art. (Figure 9)

Typically one does not touch the art, but the anamorphic qualities of these little buzzing drawing machines, makes it difficult to be a bystander, especially if a drawing robot is perceived to be in distress. A simple arena created from a round folding table fastened with Plexiglas railing gives the drawing robots a secure place to create with out adding context or obstacles. The scale of the tiny drawing robots invites the viewer to be a watchful and sometimes interactive observer to the creative process. (Figure 10)

The larger robots, in contrast, invade the gallery space. They are designed to be in the way, wandering, poking, and waving, sometimes out of control. They autonomously move about creating lines as they go. Art is created on many levels. The large robots are sculpture, hand created using recognizable everyday items that are fashioned to draw. Art is additionally created between the viewer and the robots as they perform their mark-making feat. While the small robots reveal an inner nurturing quality, the larger robots are

now equal with us. We are no longer watching from a distance. The large robots seem intent at making marks directly on the floor. The viewer now becomes engulfed in mechanical chaos. Mindless (no microchip technology) machines challenge the viewer's choice and control.

## VI. Drawn Together

Further investigating the intersection of art and technology, I began to integrate figure painting with robotic art. "Figures" is a mixed media work on 24 x 48 inch canvas where I drew two hours of figures followed by two hours of robot drawings. I did this three more times, layering eight hours of figure painting and eight hours of robotic mark making. An earth tone palette is maintained even with the addition of bold Sharpie® markers, highlighters, and ballpoint pens of the robots. On first glance, the painting appears to be a tangled web of random shapes and lines. As the viewer spends time with the work, shapes turn into figures, and the tangle starts to separate. Finding the figures through the cloud of robotic marks creates an interesting discovery process. A strong thin black line that meanders along the top of the work holds it all together. On exhibit at The Granite Room, "Figures" was presented on the top half of a set of double doors that resembled old farm doors. The warmth of the wood and antique fixtures were a beautiful support for the piece. (Figure 11)

Continuing in this process, I allowed a robot to draw on top of a recently finished figure painting. At first glance, the robot drawing shocks like graffiti or possibly the scribbling of a child. On second look, intention starts to emerge as marks arise from the orb resting on her abdomen, creating a delicate spatter of light. The robotic lines gently follow

the curve of the body, aiding the viewer's eye around the composition. Though free to roam, this robot, equipped with an oil paint marker, seemed to be sensitive to my previous mark making. Because the model appears to be deep in thought, as well as the amount of consideration it took me to allow the robot to draw on her, I titled this work "Contemplation". At exhibition, the framed painting was displayed on the granite wall next to "Trying to Please". Hanging it between two empty prisoner rings added context.

(Figure 12)

## VII. Drawn to Abstraction

The beautiful marks made by the robots prompted me to begin experimenting with purely, robot-created pieces. One of the first products of robotic expression is an artwork entitled, "Double Draw," consisting of a variety of blue, black, and white marks, made on the reverse side of Plexiglas. (Figure 13) An additional robot drawing in similar colors on bright white YUPO® rests behind the Plexiglas painting, creating a unique sense of depth. Framed in black, this work showcases the scope of the little drawing robots, and led to a series of blue paintings on YUPO® mounted on panel. (Figure 14) Working large, I cropping the work to fit the panel giving this series a sense of infinite mark making. YUPO® has a property of recording every mark making effort made by the small drawing robots creating a sense of depth. Two-part epoxy sank past wet paint, revealing the robotic marks below. The blue series created a mark-making wonderland. (Figure 15)

## VIII. Drawing Attention

On the second Friday of every month, the Castleberry Hill district of Atlanta, Georgia holds an art stroll where hundreds of people visit the local galleries. This area of Atlanta is very supportive of local artists. Every fall Flux Projects produce Flux Night, a night of select performance and exploration featuring award winning installation and performance artists. The Escape Gallery is a literal fire escape turned art gallery that opens to the Flux event. The small robots had the opportunity to premiere in the gallery with a fantastic reception by art professionals and novices alike. (Figure 16)

Because of Castleberry Hill's support for the arts, and for its ability to attract a diverse audience, I choose The Granite Room for my Thesis Exhibition. The gallery owner allowed me to let the large drawing robots perform directly on the floor. The Granite Room has a visual history. Old windows with thick sills and crumbling plaster, tall ceilings, old wood and antique fixtures are original to this 100-year-old space. Installing my contemporary work in this historic place created an interesting dichotomy. Large double doors open the way to my exhibit, "Drawing Attention" in The Granite Room. (Figure 17) When entering, a large 6 x 2 foot painting stands like a welcoming host of the exhibit. I painted many layers of red acrylic paint expressing anger and frustration. On top, the robot art makers now in control, make black, white, and silver repetitive marks. Frustration is still visible beneath the marks made by robots creating a discourse on technology's usefulness. The custom frame makes this painting stand over seven feet tall, and like a man in uniform, standing at attention, this painting cannot by help but "Draw Attention".

The paintings in The Granite room were organized by color: red, blue, and earth tones. To help set the stage and to welcome guests I placed a guest book with black paper

and gel pens on an old rustic bench. Guests could sit and watch the robots while leaving a message or just make marks like the robots did. The drawing arena table was centered between the two windows. Deep window ledges became a place of display when not drawing attention. (Figure 18) The sound of buzzing creativity combined with random movements and the occasional flashing of light was irresistible. Viewers stood around the table, talking, asking questions, sharing ideas, and interacting with the little artists and each other. It was at this point that some viewers made the connection that these robots created the art works in the gallery. During the exhibition, moving about the floor, with the guests where large robots made of coat hangers, zip ties, and other found objects. Both large and small drawing robots work using off sync, battery operated, motor control.

Spinning marks are made on the gallery's unprotected floor rendering a sense of surprise and taboo. The floor is black asphalt, causing a rough chalkboard like surface for the robots to perform. Uneven ground aided in the randomness of the mark making, causing them to get stuck in crevasses, run along cracks, and slide downhill. Viewers felt comfortable helping the drawing robots out of jams, or giving them a new area of floor to work. At times though, people enjoyed watching a robot "suffer." When a speedy brush-bot got hung up and spun in a crazy circle, viewers preferred to point and laugh as it twisted out of control. Topics once exclusively debated by the art-world became interesting things to talk about in this user-friendly environment. (Figure 19)

## IX. Drawn Out

My final painting at SCAD became a bold work of freedom. No longer bound by people pleasing, with the shrewdness to keep experimenting days before my exhibit, I pulled

together all the meaningful elements discovered during my master's study. Using drawing robots as mark making and painting tools, material properties, color, line, texture, temperature, movements, as well as the abilities of the robots were considered. I knew how I wanted the robots to perform, and I became the conductor. I chose my favorite colors and considered the palette and structural movement of Joseph Mallord William Turner, an early 19th century artist whom I admire. Washes of acrylic inks were added on top of ink and marker using squeeze bottles and sponge rollers attached to the robots. Alcohol spreads wet acrylic paint apart revealing what is beneath, similar to the epoxy, but with a matte finish. For this work, I used both techniques, finishing the painting with a drizzle of two-part epoxy for texture and shine. The vibrant colors, the layers of line, and revealing textures make this artwork sing. Conceptually, I am pleased with this work because through the robots that I created, it is a reflection of me. As a culminating work in my search personal artistic expression, I entitled his painting "Art." At my thesis exhibition, I set this work apart on its own white wall, directly opposite "Trying to Please." (Figure 20)

## X. Drawn to a Close

Through the interaction of machines that produce art, our relationship with technology and each other is investigated. Process and experience become as important as the product. Scientific, sociological and artistic discourse is stimulated. Answers produce more questions. I prefer to pose and not to answer such questions, because, for me, a good work of art creates memories, or starts conversations. A great work does both. All resulting in a better understanding of how we work together individually, in society and with technology.

## XI. Works Cited

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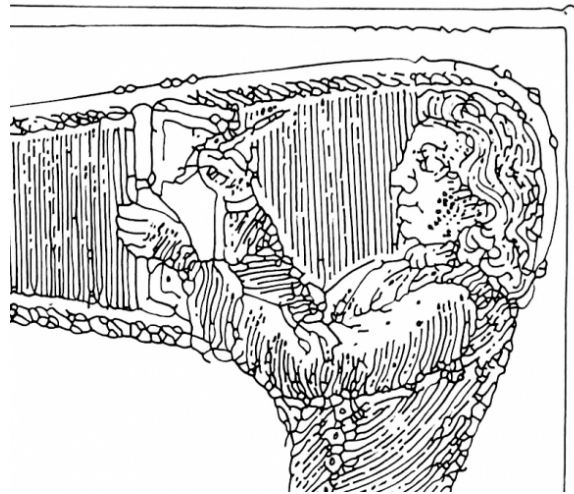
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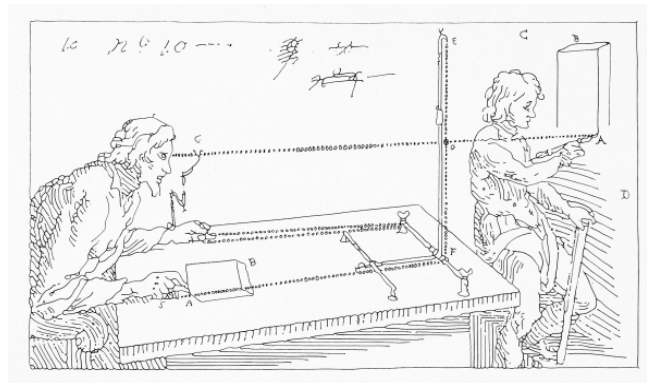
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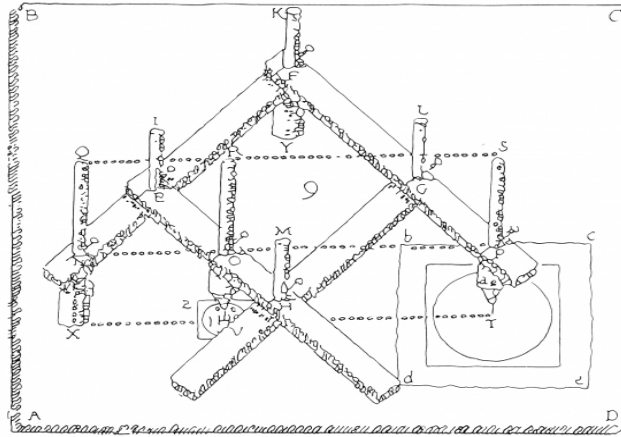
FIGURE 1: "MACHINE DRAWING DRAWING MACHINE", SAMPLE OF CNC IMAGES BY PABLO GARCIA



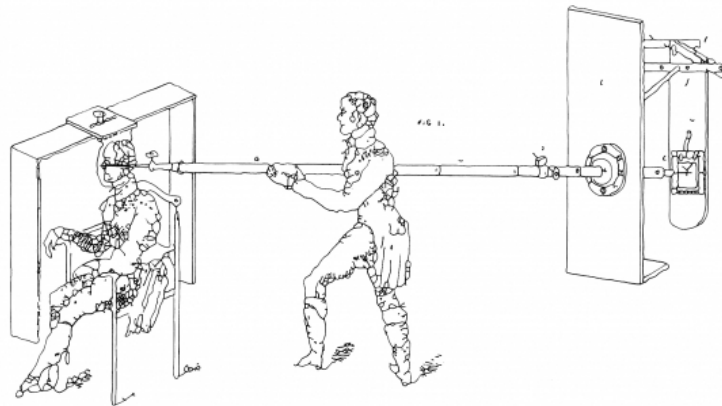
"PORTABLE PICTURE BOX", CAMERA OBSCURA  
(DETAIL) SIR ROBERT HOOKE, 1694



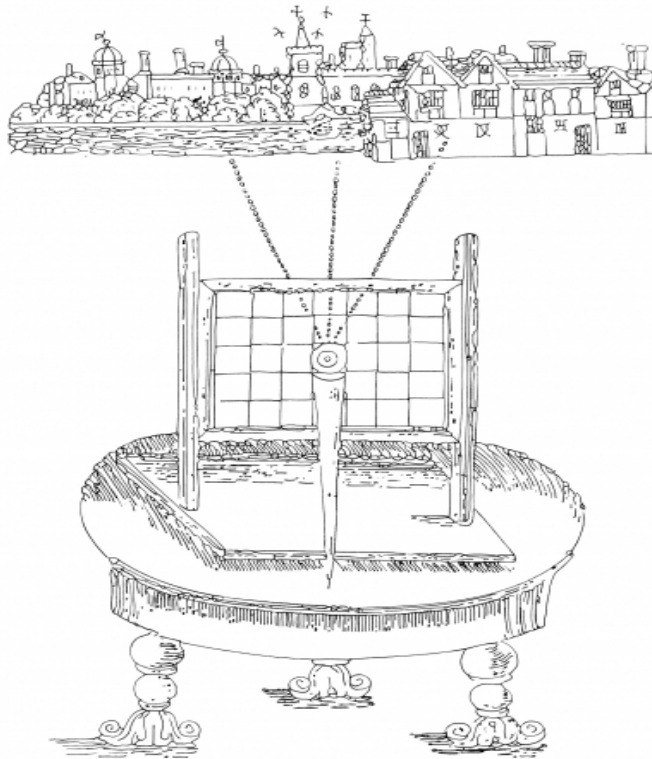
PERSPECTOGRAPH (PERSPECTIVE DEVICE)  
BALDASSARE LANCI, 1583



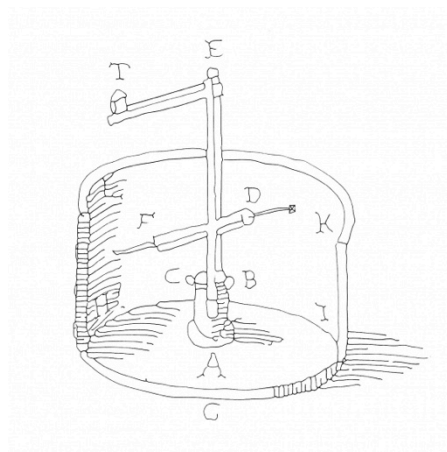
**"PANTOGRAPH" CHRISTOPH SCHEINER, 1608**



*"Profile Machine", Carl Augustus Schmalcalder, 1806*



**"A VERIE EASIE WAY TO DESCRIBE A TOWNE OR CASTLE BEING WITHIN THE FULL SIGHT THEREOF" (SIC) JOHN BATE, 1634**



**"PROJECTION DEVICE", LUDOVICO CIGOLI 1600-13**



**FIGURE 2: TRISTAN PARISH**



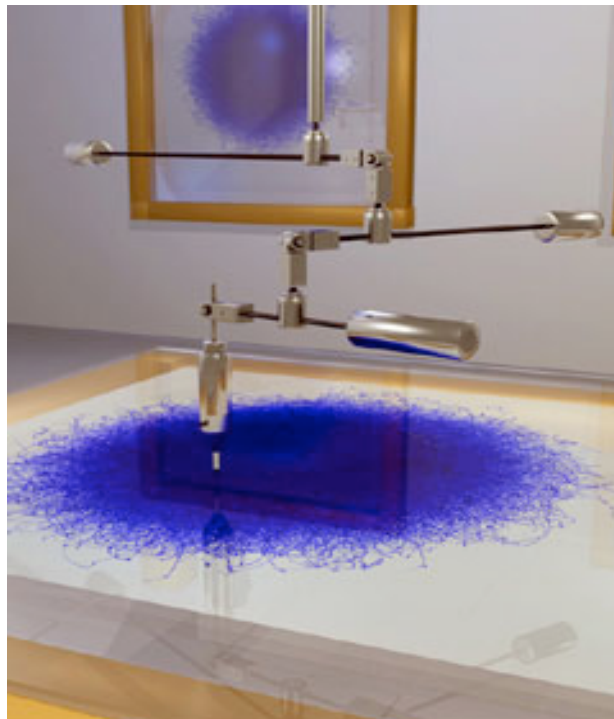
**FIGURE 3: ESKE REX**



**FIGURE 4: ALAN STOREY**



**FIGURE 5: JOSEPH GRIFFITHS**



**FIGURE 6: FERNANDO ORELLANA, "DRAWING MACHINE 3.1415926v2"**



**FIGURE 7: "TRYING TO PLEASE",60" X 114" ,OIL ON CANVAS, 2012**



**FIGURE 8: "DRAW TWO", 2013  
60"x 36" EACH, ROBOTIC MULTIMEDIA ON YUPO® ON PANEL**



**FIGURE 9: SMALL DRAWING ROBOT**



**FIGURE 10: DRAWING ARENA**



**FIGURE 11: "FIGURES", 24" x 48" MIXED MEDIA ON CANVAS, 2012**



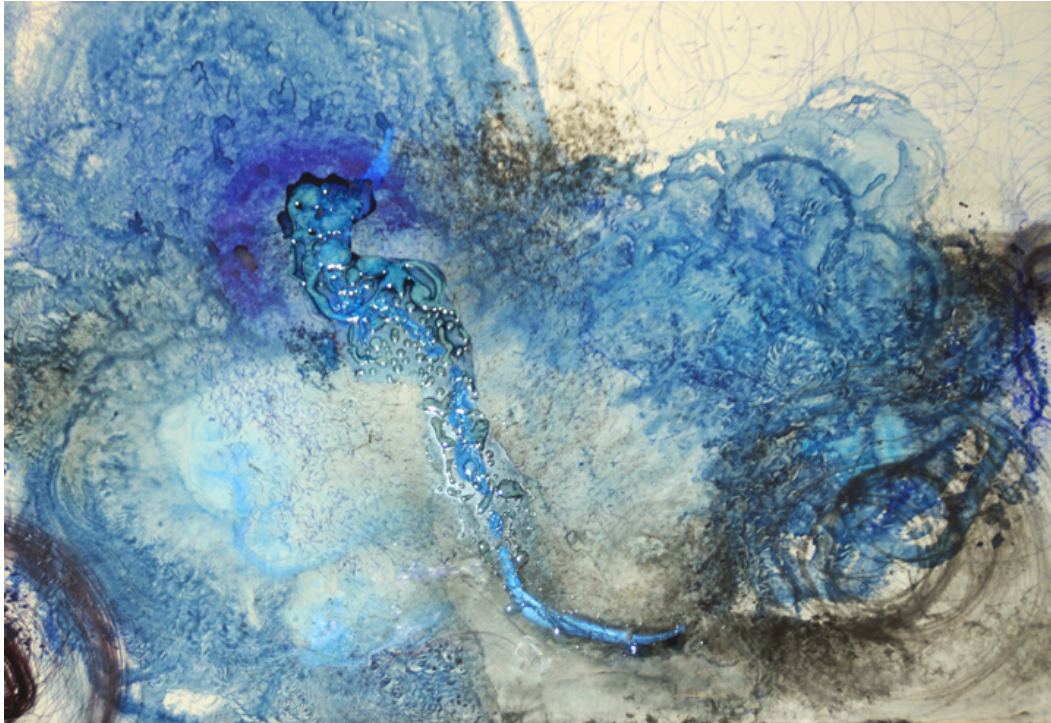
**FIGURE 12: "CONTEMPLATION", 24" x 36", OIL ON CANVAS, 2013**



**FIGURE 13: "DOUBLE DRAW", 48" x 36" YUPO AND PLEXIGLAS, MIXED MEDIA, 2013**



**FIGURE 14: "OUT OF THE BLUE", 3, 16" x 16" YUPO, MIXED MEDIA, ON PANES, 2013**



**FIGURE 15: "WONDER LAND**



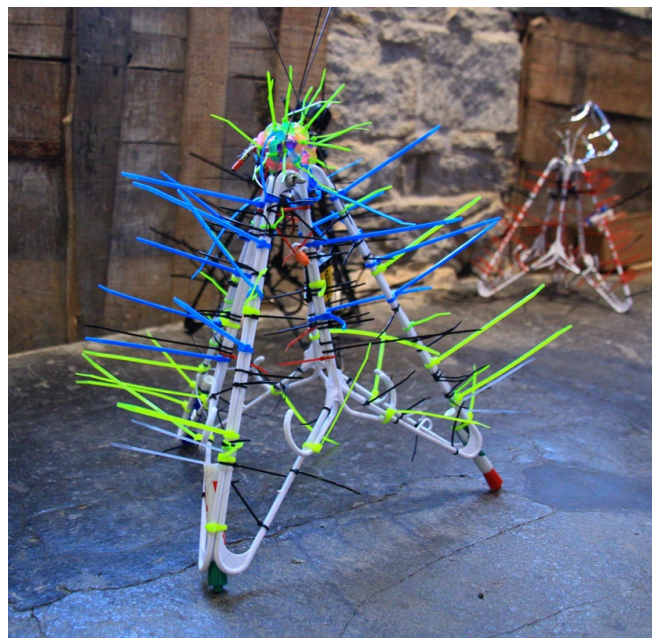
**FIGURE 16: FIRST ROBOT PERFORMANCE AT ESCAPE GALLERY**



**FIGURE 17: "DRAWING ATTENTION",  
72"x24" MIXED MEDIA, 2013**



**FIGURE 18 : ROW-BOTS AND EMPTY BATTERIES AFTER THE EXHIBITION 2013**



**FIGURE 19: MARKS MADE ON THE GRANITE ROOM FLOOR BY THE LARGE DRAWING ROBOT**



**FIGURE 20: "ART" 24"x48" MIXED MEDIA ON YUPO AND PANEL.**