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Gear Driven

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THESIS

Submitted in partial fulfillment of the requirements

For the Degree of Masters of Art,
With a Major in Ceramics

Governors State University
University Park, IL 60466

2012
Gear Driven

Merging the past and the present and the simplistic with the complex, form the foundation of my work. My sculptural work in ceramics depicts hybridized versions of distinct pieces of machinery that have been distorted and fused together to create ambiguous forms that offers a sense of curiosity and draws attention to each piece. These pieces are reminiscent of the types of rusted and decayed parts I found lying around my grandfather's truck yard when I was a boy. Machinery appealed to me not only because of the interesting forms but also because of the visual texture and enduring quality that iron possesses. Furthermore, mechanical parts have an aesthetic value that is not typically admired and often overlooked because of their functionality.

Treasured Childhood Memories of Awe and Creativity

My work recreates the mystique similar to what I experienced as a child at my grandfather's excavating company: seeing something familiar but not fully understanding its function. His business, which was next to his house, included a truck yard and building that were filled with heavy machinery, trucks, tractors, backhoes, and other types of equipment. Everyone in my family worked in the business except for me. I was the youngest and not old enough to work, so the truck yard became my playground. The yard was like a jungle gym that was overgrown with weeds and dotted with nooks and crannies crammed with every old thing, because my grandfather was very frugal and did not throw anything away. What was left behind was used for parts that often sat somewhere in the shop. Giant rusted parts from trucks and tractors and shinny metallic innards of stripped engine blocks, transmissions, gears, crankshafts,
or wheel bearings became the objects of my imagination.

I was always in awe at the sight of these things, and my grandfather’s disheveled shop and yard added to the excitement. It was impossible to walk through these areas and not get dirty. The floor, which was always thick with dirt and grease, needed to be scraped rather than swept. Within this mess, one could find an opened gear box or engine with oily metal gears glistening like new, in stark contrast to the grit surrounding it. Outside of the shop, huge pieces of machinery, chains, cleats and teeth for tractors used to move and dig were strewn around the weedy gravel yard. Every piece appeared very symmetrical – either crude looking or complex – and weighed thousands of pounds. They had different textures, depending upon age and amount of use. For example, giant pieces of solid iron rusted from idleness, but other parts were shiny from friction or wear. These treasured childhood experiences helped define my artistic expression, which is why I think of my pieces as part of a landscape and not merely objects or sculptures.

The Past Melds with the Present to Create “Gear Driven”

I believe that the idea for my body of work developed from a string of subconscious thoughts converging from past and present influences. The past includes my childhood relationship with mechanical parts, and the present consists of my experience collecting vintage items such as decorative metal ornaments, metal advertising items such as signs related to transportation, food, or beverages. I collect these items primarily for decorative purposes and display them in and around my home. These collectibles have an appealing and nostalgic look that reminds me of past generations and even my childhood. I merged their meanings with childhood memories to create “Gear Driven,” a sculpture series that pays homage to my past and is made and presented as a collectible.
The series expresses my discovery of the relationship derived from personal reflection and creativity. This body of work is in no way an encapsulated (isolated) group from a single idea. It is part of a larger series of my ongoing investigation into man-made forms and nature.

Motivation and the Creative Process

My approach to making a comprehensive body of work began with much deliberation. I chose to work in a medium that I haven’t fully explored and up until this point, I had never assembled a body of work in such a preconceived way. My mind raced to grasp ideas and themes, which seemed like an exercise in futility. I was also afraid that I was going to create an idea that was a gimmick or something I was not invested in.

Furthermore, the idea of creating three dimensional pieces was daunting because most of my education and artistic outlet had been spent working two dimensionally with painting and drawing. I have taught high school art for thirteen years since 1998. In 2007, my role expanded when ceramics became a core part of the curriculum. During this time frame, I experimented with clay and learned the techniques associated with building and firing in order to effectively teach to my students. After a certain amount of time I found myself more and more interested in the medium and began creating pieces of my own. Working in clay opened up a new avenue of expression with different boundaries. Therefore, choosing ceramics as the major for my Master of Arts degree was a significant step forward artistically and professionally, and was a way for me to create and understand art in new way. Working out of my comfort zone in a high level of education and taking on a medium I was not proficient in was incentive for me to push the limits technically and conceptually. This forced me to understand the medium in an intimate way and increase my knowledge as a student and teacher.
Prior to beginning my work in ceramics, the work I developed two dimensionally prepared me mentally for the course work of an M.A. degree. I developed a series of paintings in a couple of graduate classes prior to my concentration in ceramics. Even though I had some success in these classes, I experienced an equal amount of frustration with symptoms of artist block. Transitioning to ceramics allowed me to step back and reevaluate my position as a student and artist. Taking seriously my role as a graduate student I now encouraged the pitfalls and artist blocks associated with developing technique and concept and accepted these as a learning experience. With this fresh approach, I felt as though I had matured as an artist. I felt positive and excited when I began my coursework. I put aside my inevitable goal to develop a body of work consistent with a particular idea or theme and chose to just re-familiarize myself with the medium of clay. Therefore, I experimented with different building techniques on and off the wheel. As I searched for new ground, I was drawn to the physical properties of clay. My interest became one of pushing the boundaries of what I knew to be the limitations in size, thickness, suspension of weight, and constructing and attaching multiple pieces. And soon and I felt like I had no shortage of ideas and motivation.

As a result, I focused great attention on the building process, which reminded me of my experiences outside of art. As a property owner, I have had a great deal of experience remodeling and refinishing homes and furniture. Mainly self taught in these areas, I find a certain amount of satisfaction in seeing something renewed or built from scratch. I receive this same satisfaction with using clay. What I find fascinating is its inherent properties as a sculptural, malleable piece of material that can be carved negatively or applied positively. It can also be assembled constructively to serve as its own foundation and support system to build mass. I used these characteristics to approach my work. While I felt comfortable in my sculptural abilities to
develop detail, the challenge became the actual building process before I reached that point. Each piece possessed its own set of challenges to build and fire, and only a few of them shared the same blueprint.

The Creative Process in Action

In retrospect, all of my experiences fit perfectly within my new plan. I started by using the form of a gear as my subject matter. I was led to this subject through creating a series of sample pieces that I embellished with geometric patterns. Like many ceramic artists, I started with coil pots and wheel thrown pots. However, I began manipulating the surface of the pots with designs and even carved into them or through them, thus eliminating their functionality and rendering them purely decorative. I then added elements to create textured surfaces reminiscent of something mechanical. At this point, I became interested in just making the sculptural elements without the pot. Breaking away from the form of a pot or container was my first step towards a new approach.

After creating these sample pieces, I settled right away on the form of a gear. I have collected gears over time for a variety of reasons but primarily for use as still life material in my classroom. The gear's simple geometry and balance fascinates me. I see movement in this inanimate object whose multiple teeth around the edge seem to go on forever. The gear's repeating elements and symmetrical design spiked my curiosity and inspired me to recreate - in clay - its radial motif.

This motif is present throughout the series, which begins like a narrative that explores my investigation into the technical limits of clay's structural integrity. The first sculpture that I created is comprised of three different sized gears, and each of them is assembled in a different way. These building styles became the plan for the entire series. The first gear was made from a
single slab of clay that I rolled out and flattened to the depth of approximately one inch thick and one foot in diameter. Unlike the first gear, I built the second one using several thinner slabs that were assembled essentially into a box. (In later sculptures, interior buttressed walls help support and suspend larger spaces, which allowed me to create larger pieces with less weight.) In contrast, the third gear was created on the wheel and enclosed in the same manner as the second gear. I then used different combinations of these three styles to create other pieces, which were modeled and carved to the likeness of specific gears.

As I progressed, each piece became more complex technically and stylistically. For example, my initial focus depicts gears of various shapes and sizes and then shifts slightly towards a variety of other machined parts and mechanisms, brake rotors and discs, crankshafts, threaded bolts, and chain links. These parts have properties of balance and movement and share a commonality in the design elements and locomotion of the gear. As with the gears, I continued the process of manipulating these new pieces by distorting and merging parts together, while leaving other pieces as portions or remnants of larger devices.

I also began to combine pieces made from the wheel and slab, and my pieces became bigger and more distorted forms of gears. As the pieces became heavier and more difficult to hold aloft, I used interior supports made mostly of clay and sometimes newspaper to suspend the tops (see fig. 4). Yet it became increasingly difficult to support the clay while trying to maintain the distorted look I wanted to achieve. As figure 3 illustrates, I had to prop up the interior of the sculpture to keep it from sinking in on itself and provide support for the exterior to maintain the desired bend. Other sculptures, like figure 5, needed slump mold materials to hold the pieces up. The three gears surrounding the frontal piece are held together by a sort of balancing act, which required removing support material.
Planning and improvising were necessary every step of the way to create these pieces. Sometimes I had several sculptures taking shape at once, which involved keeping one or more at a workable consistency over several weeks. This involved spending a significant amount of time checking and maintaining several different levels of hydration on multiple areas of one piece at a time. The final piece of the series embodies all of these factors.

I wanted to make something not typically meant for ceramics, so I created a sprocket and chain that consists of interlocked pieces with moveable parts. The idea was to hang the piece from the wall with the chain seated on the sprocket and dangling down. To make the chain, I studied the structure of a chain link to duplicate its exterior including the moveable joints necessary for bending. Then, I created chain links that consist of independent cylindrical tubes inside both ends of each link, which allow for movement and structural integrity. The idea was to make the chain bend at each link, but this presented a challenge on several different levels. First, I had to consider the limit in length for an uninterrupted chain to fit into a kiln. I toyed with the idea of making the chain in several sections so I could attach the pieces post firing; however, this idea never appealed to me and undermined the challenge I set out to meet. Second, I had to build a moveable mechanism between each link and maintain a desirable working consistency, which involved keeping the clay moist enough to connect individual parts. Lastly, I had to determine the appropriate amount of space needed to accommodate shrinkage between the moveable parts.

In addition, for this piece and the entire body of work, I explored a range of varying glaze applications and firing techniques.

The Kiln Process
The construction of each piece and the complexities of their designs worked hand in hand with the firing and glazing process to give them their final appearance. I explored three kiln firing processes: salt, raku, and electric. Salt and raku are reduction fires that add distinctive qualities to the color and surface texture of a piece. Moreover, kiln space influenced the outcome of each piece differently; therefore, I tried to maximize the look, feel, and size of my pieces by using a variety firing techniques. For example, I used salt and raku generally for the smaller sculptures because of limited kiln space.

Creating the Graduate Show

The culmination of my work - its look, feel, and relationship - had to be dynamically expressed in my graduate show. Specifically, the look and flow of these pieces had to work together as a cohesive unit in the gallery setting. To enhance this effect, I used crates made out of rough sawn oak to create pedestals that fit the look and feel of each piece. This added a rustic yet industrial feel that complemented each piece. To further heighten this atmosphere of the natural and simplistic intertwined with the industrial and complex, I developed an installation that was placed at the entrance of the gallery. It consisted of a large crate-like work table that had an assortment of small gears, springs, nuts, and bolts made from clay strewn across the top. Behind the work table and against the wall hung a 10'x10' backdrop that I created. On it were collages of my drawings including mechanisms and gears pieced together like segments of blueprints or directions for assembly. This scenery was an important part of the feeling I aimed to evoke in people. I wanted them to get a sense of the workshop and truck yard that inspired my work.

Building From the Past to Create Complexity and Spark Curiosity
My whole process from start to finish became one that inspired each of the forms that followed. My desire was not only to create a form of interesting appearance and one that follows my theme, but also to push the boundaries of my technical merit. In my endeavor to make more complex forms, I began to merge other mechanical forms such as bearings, brake rotors, and wheel drums together. Merging machine parts or distorting their form was an attempt to confound observers’ encounter with the pieces. It is apparent that they are mechanical pieces of equipment that look familiar, but altering their form creates ambiguity in comprehending their function. My goal was to create a sense of curiosity similar to my experience as a child playing in my grandfather’s truck yard amidst familiar parts that had a use beyond my comprehension.
Richard Cammarata

Image List

Title: Centrifuge

1. 2010 Ceramic Salt Fired
   13” X 13” X 5 3/4”

Title: Progress

2. 2010 Ceramic Salt Fired
   17” X 10” X 6”
Title: 7R7
3. 2010 Ceramic Salt Fired
12” X 12”

Title: Dredger
4. 2010 Ceramic Salt Fired
12” X 12” X 7”
Title: Progress
5. 2010 Ceramic Raku Fired
   16” X 14” X 4”

Untitled Sprocket and Chain
6. 2012 Ceramic
   5 ½’ X 2 ¼’
Untitled: Installation

7. 2012 Ceramic, Drawing, Oak
    12' X 9' X 2'

Untitled

8. 2011 Ceramic
    20" X 16" X 12"
Title: Crank
9. 2011 Ceramic
   13" X 8" X 8"

Title: Bolts
10. 2011 Ceramic
   25" X 16" X 7"