Maria Sippola

Assistant Professor Michael Maguire

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# An Objective Reality: Transitioning from 2-D to 3-D Methodology

I entered the Studio Art program in the fall of 2014 with the intent to study sculpture, with a thorough exploration in ceramics, in order to expand and develop skills that were previously limited to two-dimensional work. Through full immersion into three-dimensional work, I anticipated gaining necessary insight into which materials were most appropriate for my sculptural needs. I predicted that ceramics would fulfill those needs, and that I would benefit from an intensive plan of study so that I could become competent with the medium for my own artistic purposes, as well as for future teaching opportunities.

At the beginning of my studies, two-dimensional work was my primary method of expression. My focus in drawing and painting was largely form, and rendering form through illusion remained unsatisfying as a singular approach. I was in search of a more tactile creative experience. Despite previous school experience, my two-dimensional methods were largely self-taught. I did not wish to approach sculpture in the same trial and error method, or by inconsistent research opportunities. By entering the Studio Art program, I hoped to gain the uninterrupted time and focus to explore ceramic methodology.

I expected initial research to be devoted to building techniques. I anticipated regular practice throwing on the wheel, as well as hand building through slab and pinching techniques. The initial forms I was capable of were simple, traditional vessel forms, such as cylindrical

forms, bowls, and vases. Simplified sculptural forms were constructed with a basic thrown vessel form, at which point much of the rest of the sculpture was completed using pinch methods. I determined that it would be necessary to greater understand the structural needs of clay, testing for load bearing limits and support requirements, as well as ensuring adequate compression and adhesion of parts so that I could manipulate the clay precisely how I so desired.

I did not have any working knowledge of the chemistry involved with ceramics. I started by researching the basic properties of clay, and how to select an appropriate clay body. It was determined that I might test the properties of a clay body by experimenting with the existing cone 10 stoneware clay body used in the ceramics studio, to make it the most suitable for my needs. I would also test earthenware clay for direct comparison. I was also not familiar with the chemistry involved in glaze formulation. I intended to gain experience in formulating and mixing, so that I could compare and contrast material properties, and understand the function of each ingredient.

The ability to fire ceramic work independently was an absolutely necessary skill that I needed to acquire. In anticipation of possible future teaching opportunities, I decided that it would be important to understand the gas firing process. Also, due to previous experiences, I wanted to learn more thoroughly the wood firing process. For both of these, I needed to comprehend the properties of the kilns and furniture, the atmosphere, and firing schedule.

The history of ceramics was unfamiliar to me, and it was important to understand the cultural relevance and traditional history in order to appreciate where the medium stands today. This would not only help in understanding ceramics as an art medium, but also the tools and methods that have been utilized across various cultures.

By spending time in the studio during regular class times, I hoped to observe teaching skills so that I could implement them for my own teaching opportunities. I also anticipated practicing with regular repetition so I could better understand the process incrementally, and draw out essential components of the ceramic process.

And finally, I needed to develop a plan for my post-graduate work. It was necessary for me to develop a working and studio plan that would not only be accessible, but also feasible. It would require me to calculate actual costs in material and equipment.

In order to determine if clay was the appropriate choice of materials, and to expand my experience with sculpture as a primary medium, I also enrolled in two semesters of Sculpture. In these classes, I was able to work with bronze and the accompanying mold and casting materials, as well as wood. I discovered that bronze was challenging due to the process length of time. The incremental process and relatively small room for error did not fit well with my more impulsive working style. It required me to work with completely unfamiliar materials and processes. It also required patience, as there was no opportunity for immediate gratification. I was required to utilize an array of power tools and other tools that I had not previously used, which provided me with a greater comfort level in approaching other materials for sculptural consideration. I chose to work with cedar wood, which provided a new set of challenging properties and processes. I was able to incorporate the use of fire, which I found appealing in both ceramics and in the bronze process, to the sculpture process in wood. Both the bronze and the wood work contrasted the delicate handling required for most of the ceramic process.

My primary area of focus was ceramics. In order to address the structural needs of clay sculptures, and to test load bearing limits and support requirements, I incrementally began to

work on larger pieces. The first issue I addressed was assessing the need for internal clay supports. This was largely for slab built pieces, in order to ensure that they would not collapse under their own weight. The larger the area was, the greater the need for supports. It was noted that I needed to ensure an exit point for air circulation and to not completely compartmentalize any portion of the sculpture. I also determined that extra support such as wood or foam materials would be required for the drying process on pieces that would have disproportionate portions elevated perpendicular to the table. For example, a horse form, with four legs holding up a large cylindrical body mass, would require the body to be supported externally during the drying process. This could be done with any removable material, such as 2x4 boards, before the legs would be stiff enough to support the weight. These materials had to be easily removable; being lined with paper or inserted into the piece with sizeable space around it, or the clay would shrink and crack where it was caught. Large flat areas, regardless of placement within the sculpture required adequate compression, and could be achieved with tapping with a board. Large, flat areas that did not receive compression of some kind cracked with consistency. Wheel thrown components were best hand or tool compressed on the bottoms, and larger slab pieces were best compressed with a board before being shaped. The adhesion of various parts within each sculpture required little testing. I found that through thorough scoring with a tool such as a fork, and generous amounts of slip, I had few problems with pieces adhesion. I did find a preference for using thick paste-like slip versus watery slip. It left less mess and in some cases, gave better adhesion.

The clay itself was for the most part consistently a high-fire, cone 10 stoneware, consisting of fireclay, ball clay, and feldspar. I altered the clay body by adding various amounts of grog. While increasing grog levels initially made throwing more painful, eventually my hands

acclimated. I found that fine grog doubled did not achieve the level of firmness that most of my sculptures required. By tripling the fine grog and adding an extra two scoops of course grog, the clay was sturdy and forgiving in thickness during the firing process. I did not have any "blow outs" while using heavily grogged clay. However, as each test increased the amount of grog, the clay became more and more dry, and less flexible. Although I intended on accenting the natural cracking features of clay, it became a weakness in the structure. By adding vinegar to the clay after mixing, it produced buttery, smooth clay, with the potential to form interesting roughness and cracks, without sacrificing stability. Initial tests included a few cups. This mixture sat for two weeks before use. While it improved the consistency, the setting time was insufficient. For the following batch, it was made well in advance, with ½ of a gallon of vinegar. This sat for four weeks, and was an exceptionally flexible and malleable mixture.

The alternate clay body used was earthenware, which also received a vinegar solution, and sat for roughly four weeks. The consistency was soft and malleable. Because this was not a material I anticipated working with more than one time, I did not test the clay with varying amounts of grog. It contained two scoops of fine and one of coarse. Its purpose was for wood kiln firing, so I largely focused on the firing process, and less about the clay.

I started my research in glaze formulation by first practicing mixing the existing glaze recipes in the studio. I took note of similar materials, and researched their properties in the readings listed on the citations page. In order to test the properties of materials in glazes, I started with a simple two-part Shino glaze, cone 10, varying the percentage ratios of Custer Feldspar and EPK in opposite succession. I tracked the results by labeling the corresponding cups with numbers assigned to each mixture. Following the two-part Shino, I proceeded to test four-part recipes. Using a combination of Feldspar, Ball Clay, Soda Ash, and Spodumene, I once again

formulated them in varying percentage ratios, and tested with labeled cups. The results were documented. Once I was aware of the properties of the materials, I searched for glaze recipes that used materials that would yield desired colors, adjusting them to accomplish specific color responses.

At the start of the year, I had very little experience with kilns. As it would be imperative to understand the firing process in order to independently fire my own work, and to teach classes, I became actively involved in all stages of the firing process. I read about gas and wood fire kilns during the year to better understand kiln atmosphere. I assisted in loading, firing, and unloading both the bisque and the glaze fires. During this time I assisted with only the gas kilns. During a wood kiln workshop, I was able to better practice identifying kiln temperatures and atmospheres through visual confirmation of colors and surface of the pieces.

I utilized my time in the studio to develop teaching skills. I was able to stop and observe lectures and examples given to undergraduate classes during demonstration times. It was greatly beneficial to have the ability to watch the same demonstrations with repetition over the course of multiple classes. I was also able to assist students with simple questions and problems, allowing me to practice terminology and problem-solving. Through my own intensive blocks of time in the studio, I was able to practice techniques for multiple hours in succession, each day. I took notes on all experimentation in glaze formulation, artists to study, and books and videos of interest. These were taken in a hard cover notebook, so that I can maintain the notes and continue to add to them over time.

In order to greater expand my understanding of the history of ceramics, I committed to readings that would exemplify techniques and traditions of other cultures. A full list of readings

can be found in the references. Focusing largely on areas of Asia, with some South American and African techniques, I read and observed simple hand-building techniques and simplified firing technologies that do not rely on modern equipment. I also studied the development of the modern ceramics movement in the United States, with extensive reading research on Peter Voulkos.

During the year I began to formulate an independent working plan in my notebook. In order to meet my needs with a limited budget, I determined that I would have to minimize my required glazes, clay bodies, tools, and kiln usage. After considering the use of low fire clay and glazes, the aesthetics were not conducive to my overall goals. I was hoping for some, but not total control over results and the unpredictability of high-fire glazes worked well. The clay body that I had been using was inexpensive, and I formulated a plan to mix at home using make-shift mixing techniques, such as mixing in a bin by foot for large batches, akin to non-western techniques. Fortunately my tool use was limited, and mostly comprised of inexpensive manufactured tools, or found objects, so no long-term plan was needed to assess my access. An electric wheel would be necessary for my building techniques. The starting costs were immediately prohibitive, but would not be in the long-term. However, there were multiple opportunities to consider, including making a make-shift one out of available parts, refurbishing an old wheel, or finding rental space with wheel availability. Lacking the funds to acquire a gas kiln in the near future, I determined that my best alternative would be a wood kiln, because I was not interested in a consistently oxidized atmosphere of an electric kiln. This would allow me to have more surface effects. Brick pricing determined that I would be able to achieve a modest sized kiln, so plans would have to be finalized in order to assess the full cost.

Despite having only one year in which to complete my projects, many goals were met. Working with bronze increased my power tool competency and comfort level, which was limited at the start of the program. It also allowed me to expand my tool use for wood carving, to include tools such as chainsaws that I might not have felt comfortable using otherwise. I did enjoy wood as a sculptural medium, but largely for the ability to use fire as a carving tool. It is something I intend to return to in the future.

At the start of the year I was unable to build complex forms, or expound upon existing form. I achieved both the ability to build structurally sound sculptures in clay, often through mistakes, and moved toward greater interpretation of form. The terminology required to explain and comprehend ceramics methodology was vast and complex. However, through dedicated repetition and intentional daily use, I feel much more confident in both my ability to express proper terminologies, as well as to understand them. I have a good foundation in understanding basic properties of clay and glazes. I now have enough of a knowledge base to determine which clay and glazes are appropriate for my identified needs. I am adept at finding, utilizing, and designing tools to fit my building needs, as well as using the wheel. I feel confident that I can quickly learn the individual intricacies to fire any gas kiln, and that I am competent to fire a wood kiln, though I would prefer more practice. Considering the complexity of a gas kiln in comparison to an electric kiln, I understand the basic principles involved with the firing process, and could easily learn the proper usage of various electric kilns.

Before I began my instruction, I had very little knowledge of the history of ceramics. I have expanded my familiarity with nonwestern ceramics to include information about techniques requiring minimal technology and resources. I have also broadened the scope of nonwestern ceramics I have studied to include South and Southeast Asia. With little to no background in the

history of ceramics in Western culture, I am now familiar with the American ceramics movement and it's place within the overall context of art history.

At this time I feel confident conveying key principles and techniques in clay. I believe I have the competency to teach on a basic level, and look forward to developing my competency further so that I can assist others to advance further with their own skills. I can look forward to teaching, which I would have been unable to do at the start of the school year.

After gathering information in order to create a personal studio plan, I have found that it will be a manageable endeavor with proper funding. A once intimidating prospect to consider, I now have the ability to follow a plan for my budget. I discovered that I will need to develop my personal studio over time, but that it is not necessary to have a full functioning home studio in order to continue my work. In order to avoid taking up space and bringing a large mess into my home, I opted to rent studio space at the Duluth Art Institute until a more suitable time arises to establish a home studio.

At the end of the school year, I have achieved my goals, and have a feasible plan in place to continue working in clay. I am familiar with the important methodologies involved in ceramic art, and the history that has brought it to where it stands today. I am confident with my ability to incorporate clay into my teaching repertoire. It seems it was advantageous to start with limited experience in clay, as I could only bring with me basic design principles, but little to no preconceived opinions or ideas. It allowed me to work entirely free, able to make mistakes, and to learn from them, and to appreciate every success.

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By

Maria Sippola

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Major Sponsor

Program/Department Chair

~~Assistant~~ Dean, Graduate Studies

University of Wisconsin – Superior

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