Simplicity in form: functional and sculptural

Mary Roehm

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A Thesis Submitted to the Faculty of
The College of Fine and Applied Arts
in Candidacy for the Degree of

MASTER OF FINE ARTS

SIMPLICITY IN FORM: FUNCTIONAL AND SCULPTURAL
by
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November, 1984
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Date: 16 Dec. 1984
Thesis Proposal for the Master of Fine Arts Degree

College of Fine and Applied Arts
Rochester Institute of Technology

Title: Simplicity in Form: Functional and Sculptural

Submitted by: Mary A. Roehm Date: September 29, 1978

Thesis Committee:
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Date: 12/11/84
I would like to create a series of pieces both functional and sculptural, that are simple and related to each other in form. I plan to use a whiteware clay for this purpose. Working towards a direct statement of strength in form, I will explore different forming methods.

These pieces will number 12 to 15 and range from six to 30 inches in size. As may best complement each form, any one of a variety of firing methods may be employed.
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For Frank and Loretta,
Ruth and Hobart.

Thanks for all the love,
the support and the time you gave me.
You're all with me
and you together,
living fully.
I. INTRODUCTION
As I stated in my thesis proposal, I created a series of pieces, both functional and sculptural, simple and related in form. I chose the bowl form as my point of reference and experimented with a variety of forming methods such as casting, hand construction and throwing. I found throwing best suited to me. I worked with the vessel, throwing and altering the form and combining it with slab construction techniques.

This written portion of the thesis is a record of the personal and artistic development I experienced during my graduate studies. To the present time, I continue to work with form as my focus, using the bowl as my point of reference. Through my graduate studies and to the present time, a journal was kept as a record of my growth. Entries from the journal have been quoted where relevant to the thought being expressed.

May 1978: "I've completed my first year of graduate school, one more year to go. A two-year program seems necessary for both personal and artistic growth. Next year, thesis year, is the time to focus on developing my own aesthetic." At that point, I had been working with porcelain for six months, but was not yet appreciative of its particular character. It was a love/hate relationship; mostly contempt for the white clay over which I had no control. It seemed both a challenge and a threat to me at the same time. Until that point, I worked primarily with stoneware, feeling quite competent in handling the material. Porcelain called for very different ways of working, along with patience and self-discipline. I felt this was the right direction for me to go, even though it seemed so difficult and frustrating.

As I continued to work with the clay, I slowly gained a better understanding of the material. It was exciting! Porcelain suited me well. I began to see a clarity and freshness in form that was peculiar only to porcelain. It was also clear, through this study of form, I would experience personal growth as well.
The clay called for a more subtle but direct handling. I had to work confidently to retain a good, fresh line. I had to become more trusting of myself in seeking the clarity and consistency I chose to express through my work.

September 1978: "The form of an object seems to be the foundation for a strong expression. Surface embellishment and color will come through a fuller expression of form."

October 1978: "There is a direct relationship between seeking to express strength through form and seeking to express my personal strength. This commitment to study form involves a commitment to be honest with myself in a personal and objective way. Admitting my ambition scares me!"

How naive I was to make such a thesis proposal; how grateful I am that I did.
II. FORM
"Form encompasses a harmony of systems, a sense of order, and is that which distinguishes one existence from another." ¹

To focus on form with the bowl as my reference, gave me a point from which to work. Symbolically the vessel is a life-giving form, strong and reflective of that which is within.

November 1978: "The bowl: an evolutionary process is taking place. I feel a greater sensitivity to the clay, and am better able to concentrate on the clarity of the line. Decisive movements are becoming less labored and more lyrical. In clay, form is a line drawn three-dimensionally."

Working with the bowl form was not confining or boring. It seemed to hold limitless possibilities. It is a full, giving form, strong, centered and well balanced. For me there is a personal affinity to the bowl form.

In making a bowl, I work from the inside out. The definition and the energy comes from within and the outside is supportive of it.

In this study of form, the single pieces evolved from working in series. Working through a series of pieces allowed for variations of a basic relationship of form to develop. It is through that relationship that clarity and strength of form is revealed. The process of working through series has been most evident in my work, from the beginning through my thesis exhibition and to the present. Four series of work developed from my exploration: tiny-based bowls, cone bowls, split bowls and teapots.

The most important source of inspiration for my work was the human body. Other influences came from nature, architecture and photography. Other ceramic artists who have contributed to my own sense of form include Hans Coper, Lucie Rie, Geoffrey Swindell, Ruth Duckworth, Ruth McKinley, Karen Karnes and Betty Woodman.

January 1979: "A successful form is the harmony of the clay, the line
and the fire, all parts working to express the spirit of the whole piece. To understand this means to see it in the work. How long will it be for me to own this understanding?"
III. EVOLUTION
By working in series, moving from one piece to the next, I gained both technical and aesthetic clarity. My mind/hand coordination improved a great deal through working repetitively. I was interested in a form that was freshly drawn up, not belabored or overworked. The quality of the line drawn was critical to making a strong statement through form.

In this chapter, each series of work developed will be discussed. Please note the four series presented grew from, or parallel to, each other. As possibilities or questions about a form I was working on arose, a response came via the next piece or as another series developed.

Through this process, I learned a great deal about self-discipline. In order to move ahead in the manner I chose, I had to work consistently and daily.

February 1979: "Working with porcelain is a challenge that keeps me on my toes, alert and off the fence. It is the right clay. Now, what means of firing?" Determining the firing methods for finishing the work was another process of experimentation. Up until that time, I worked primarily with cone 10 oxidation. Oxidation firing seemed too predictable. I was interested in the firing becoming an active part of the piece. I experimented a great deal with raku, sawdust firing and high-fire woodfiring. I was drawn to these primitive methods because they seemed to enhance the spirit of certain forms on which I was working. There was a certain amount of chance involved here, but the more I worked with the fire, the more attuned to it I became. I learned to work with the fire and was able to control surface color and texture to a great extent.

I believe the firing method should suit the form so well it becomes an equal part of the end result. One should not rely on the fire for the success of a piece.
Tiny Based Bowls

1. Untitled. Thrown and altered, porcelain, cone 10 reduction, interior clear glaze, 7" height.

2. Untitled. As above. From left to right, 5", 6½", 8" height.

3. Teabowl. Thrown porcelain, cone 10 reduction, celadon glaze, 8" wide.
Each series of work called for firing methods that employed one or more of the firing techniques mentioned, as well as cone 10 reduction gas firing. How a piece was fired either enhanced or detracted from the overall feeling of the work. It was an important lesson to learn, not to get caught in process. What might work well for one piece might not for another. To develop an honest eye and objectivity was a challenge in itself. As each series is further discussed, the firing process will be addressed.

**Tiny-based Bowls**

The Japanese Zen masters saw technical proficiency and discipline as a means of achieving creative freedom.

"Draw bamboo for ten years; become a bamboo; then forget all about bamboo when you are drawing. In possession of infallable technique, the individual places himself at the mercy of inspiration. Artist and product, man and object, are one. Selfhood is extinct and the genius can unfold without limitation."

Knowing the capabilities of one's tools and materials can certainly help artistic expression become clearer. Technical knowledge is not an end in itself, it is only a tool that can assist an artist in extending himself or herself through his or her work.

The tiny-based bowls were my beginning and initially viewed as an exercise in technical skill. I felt I had to have some control of the clay in order to make such full, tall bowls on such tiny bases. Author Tony Birks uses the analogy of swelling breast-like forms springing from a tiny base for Ruth Duckworth's work. I like that analogy, it fits her work well, and it was something I thought about when making these bowls. I wanted them to spiral up as if they had grown from a point.

With certain technical considerations I was able to do that. I worked
Teapots

1. Teapot, thrown and constructed. Celedon glaze, cone 10 reduction, 6 cup.

2. Teapot, thrown and constructed. Clear glaze, cone 10 reduction, rafia wrapped handle and flat reed cradle. 6 cup.

3. Teapot with handle off the back and matching cups. cone 10 reduction, Albany Slip glazed. 4 cup.
with very stiff clay, working quickly with a minimum amount of water. I found throwing with slip-water preferable to fresh water as the clay surface was better wetted. The surface was more slippery and did not absorb the water as quickly, thus the clay stayed stiffer longer.

Minimum contact with the clay in raising and shaping left a cleaner line. Working with the tips of my fingers and a rib for definition gave the best results. By working this way I could thin the wall out to a fraction of an inch and keep trimming to a minimum. I felt that trimming beyond what was essential at the base of the piece contradicted my intent to define the form working from the inside out.

The pieces themselves varied in size from six to 14 inches in height and all were wheelthrown off the hump. They were all fired to cone 10 in a reduction kiln with a thin layer of clear glaze applied with a spray gun. They were elegant, ethereal pieces. The vitreous, semi-gloss surface exposed the form in its best light.

Porcelain reflects light differently; it seems to soak it in, highlighting every gesture in the form. The translucency was a bonus, a delightful surprise to the viewer.

Teapots

Prior to this commitment to study form, a teapot was just a teapot, only a form necessary for steeping tea. I have since learned the teapot is a very complex design problem.

Initially I felt drawn to study the form as a sculptural object alone and proceeded in that manner. This did not work well. After several months of trying to ignore the function, I decided to accept my own intuitive desire for a teapot that worked and be on with it.
I made a lot of teapots looking for the right parts to fit my inverted bowl forms. The two forms I focused on were a flat-bottomed teapot with a handle off the back and an oval shaped, more sculptural teapot with an exaggerated handle and an off-center lid.

The flat-bottomed teapot was thrown as if it were an upside-down bowl, wide at the bottom, closed in at the top. The spout was thrown and attached at the very base of the wall to allow a natural flow of tea from the pot to the cup without extreme movement. The handle was pulled in three separate pieces, joined, then attached in one spot on the wall of the pot opposite the spout. The handle hung off the back at an angle that allowed a firm, comfortable and well-balanced grip. The lid was quite simple. It was thrown as a flat top lid with flange. The lip was altered in the leather-hard stage so as to invite a grip without fear of fumbling. This piece was designed to function as a useful, everyday teapot.

The oval teapot was more complicated both technically and visually. The body of the form was constructed from two thrown bowls, trimmed and joined at their lips. The spout was thrown and altered in order to attach it to the piece. The handle was pulled as three separate pieces, attached to the body closely but still separately, then joined on top in the center for strength.

I learned a lot about clay construction during this process. Foremost, clay has a memory: as the clay dries, as well as again in the firing, everything unwinds in the direction opposite from which it was thrown. It was imperative when constructing the body and attaching the spout and handle that all parts be at the same point of leather-hardness; otherwise they cracked. In pulling and forming the clay handles, a similar situation existed. Immediately upon pulling, it was necessary to lay them out in the U-shaped form.

2. Untitled. As above. 6" and 12" heights.


Cone Bowls
Cone Bowls


5. Untitled. As above. 8" and 14" heights.

they would eventually take to avoid their popping off the piece.

Both styles of teapot were fired in cone 10 reduction, giving a hard, vitreous finish. Again, since these pieces were functional as well as sculptural, firing to a higher temperature was necessary. The glazes I worked with were very simple: a clear glaze, celadon glaze and albany slip glaze.

For the oval teapots, I was interested in using other materials such as reed, rafia and cane. Some of the teapots had round bottoms and sat in cradles made of reed. Others had cane or rafia-wrapped handles. The oval teapot was a troublesome form to construct and get through a firing successfully. It was a one-of-a-kind piece, not at all meant for quantity production.

Cone Bowls

This series of bowls, truly body forms, grew from the tiny-based bowls. They also reminded me of the cave-like dwellings built into the walls and hollows of the earth in the southwest area of the United States. These were spirit forms that symbolized the vessel as life-giving.

All pieces were thrown upright and ranged from five to 12 inches in height. The manners in which they were finished ranged from raku to sawdust firing to cone 10 woodfiring. Primitive firing techniques were the most suitable means of finishing this series of work. These methods were supportive of the character of the work.

For human beings it is the blend of the perfect and the imperfect that make us whole and make each of us unique. This analogy is drawn to the cone bowls. Firemarks, flashing and unexpected color enriched the final statements of the forms.
Those pieces using raku were fired to cone 06, glazed with a clear glaze irregularly applied on the exteriors only. Straight washes of copper carbonate or mason stains were applied on certain pieces over the clear glaze. Depending on how quickly the pieces were pulled from the kiln and the amount of reduction, the colors would range from vibrant reds to washed out browns and greens.

The pieces that were sawdust fired were unglazed, bisque fired to cone 08 and fired in sawdust to an unknown temperature. For color and depth on the surface, I applied a copper sulfate wash or used motor oil. Wrapping the pieces in fruit skins and tire tubes also left rich marks on the pieces. The sawdust used to smoke the pieces also left color on the pots. I used exotic woods such as zebrawood, cocobola, ebony and bubinga. These woods tend to be denser and more resinous.

Towards the end of the work for exhibition, I began to woodfire the forms to cone 10. This worked very well as the forms picked up the ash from the fire, which would melt to produce a natural ash glaze. It was in this direction that I continued to move after completing the thesis exhibition.

**Split Bowls**

Working with bowls as parts for hand construction intrigued me. The bowls were thrown, trimmed, then let set to medium leather-hardness, then cut in half. Using slabs, the bowls were reconstructed with the bases centered and the bodies pivoted and realigned off-center. The bowl walls were slipped, then rejoined with slabs, covered with plastic and set aside in foam chuck to dry slowly and evenly for three to five days. They were checked frequently for cracking. Once the pieces were hard leather-hard and could be handled, I began applying layers of thick dry slips mixed with
mason stains and/or sawdust for extra texture, let them set and then scraped them. The process was repeated until the surfaces were adequately textured and colored.

This series of work was my most complicated. It took time to figure out how to reconstruct bowls and make them fit with slab inserts. They were off-center but balanced. The form itself was quite formal. Working the exterior surface loosened the form. By applying layers of slips and sawdust, then scraping, the surface took on a three-dimensional quality. You could see through one layer to the next and the next depending on how much scraping was done and where the sawdust burned out of the slip during the firing.

All these pieces were bisque fired to cone 08, then sawdust fired using hardwood sawdust, motor oil, a bit of copper sulfate and fruit skins. When necessary, room temperature glazes were applied to enhance the final surface colors.
IV. DEVELOPING A PERSONAL AESTHETIC
A person's aesthetic goes beyond tools, technique and style. It has to do with vision -- a way of seeing with the whole self. Understanding and knowledge do not come all at once. They seem to come with time and experience, literally one step at a time, each person in his or her own way. Finding the right tools and figuring out how to use them is a process that parallels the personal or aesthetic development of determining what it is one wants to say. A most difficult process: I ardently believe I want to see, but do I see?

I look at others, I admire artists and people and I respond to the clarity expressed so well in their actions and work. No, I don't want to make their work. Yes, I do want that clarity of personal expression. My bowl will be different than their bowls.

The very things that I see as my strengths are also the things with which I must struggle to clarify my own aesthetic. Spontaneity and gesture of line, the blend of the perfect and imperfect, the wholeness of a piece -- form and fire, body and soul -- many times contradict today's standards. I am of today but the concerns I need to express don't seem to know time. So I take some risks and move ahead; my growth is truly an adventure!

The quality of life a person leads can only be enriched through this process. For an artist there is a dual satisfaction: one's own work becomes a tangible reality of the clear expression of self, and it in turn enriches and provokes the lives of others.
V. WOODFIRING
Ishtar - wood kiln, 125 cubic-foot capacity, built by Mary Roehm and Linda Kitchen, currently in use.
During the second year of graduate studies our kiln-building class built and fired a wood kiln. I had never thought about firing with wood; frankly it seemed like too much work. Several of us would fire together and in doing this I found answers for which I was unaware I had questions.

After leaving Rochester Institute of Technology I continued to woodfire. I really had no idea what I was doing but the process and results excited me. The process also caused me frustration because I had only myself to rely on for direction on how to read the fire, the wind and the color.

I called Ruth McKinley and asked if I could fire with her, chop her wood, spend time and observe, to learn how I could improve my own experiences with woodfiring. It was such a relief to see how lyrical and smooth her firings were. She was calm and attentive to the fire. She taught me to read the wind and air. She helped me develop my senses and ability to work with the fire. Such a pleasure!

The fire has a distinct personality. It is important not to be caught up by it and succumb to the process. It is a balance of form and fire that makes a whole piece work. To rely solely on fire for good work is wrong.

In the balance lies a refreshing clarity, a spirited form that draws from the viewer an internal response he can't explain. The fire goes deep into the form to leave its marks. It finds and alters lines and opens irregular lips exposing thin ash glazed edges.

Woodfiring has become part of my life, an ongoing experience. I learn a lot about living from the fire and will continue with it as long as it suits my work best.
Teapot Squat - porcelain, natural ash glaze, 3-cup capacity.
Drop Lid #16 - porcelain, natural ash glaze with celadon markings, 17" high.
VI. TECHNICAL INFORMATION
Clay

I sought a clay body that would be porcelaneous, durable and versatile. Under the guidance of Hobart Cowles, I tested clay bodies during my first year of graduate school. I came up with a porcelain body that threw well for me, didn't seem too finicky and fired a full range of temperatures. It could take the thermal shock of raku and sawdust firing, become vitreous and semi-translucent at cone 5 and hold up very well with minimum cracking and warping at cone 10-11 woodfire.

The main drawback of the body is its thixotropic tendencies. I found I could deal with it by keeping the clay fairly stiff. There were also advantages to the body. The clay was very flexible in the leather-hard stage and repairing cracks seemed to work well. It also had the potential as a good casting body. Finally, the clay drew ash and flashing in the woodfire, and this was important to me.

The clay worked well for me but may not suit another person as well. Testing clays and glaze materials extensively gave me the freedom to develop a body to suit me. The recipe for the clay is as follows:

Grolleg 25 lbs.
XX Saggar 25 lbs.
OM-4 25 lbs.
Spodumene 9 lbs.
Neph. Sy. 11 lbs.
Flint 5 lbs.

A variation:

Grolleg 35 lbs.
EPK 10 lbs.
Velvecast 10 lbs.
OM-4 25 lbs.
Spodumene 9 lbs.
Neph. Sy. 11 lbs.
Flint 5 lbs.

For thrown work over 25 pounds, ½ lb. of nylon fiber is added to the clay in dry mixing.
Glazes and Slips

I was interested in a very basic glaze palette for use in cone 10 reduction, gas fired or woodfired. I worked on three glazes, two of which also worked in cone 10 oxidation. In preparing the glazes, I found ball-milling helped give a fuller color and fattier look to the surface. The recipes are as follows:

**Celedon cone 9-11 (reduction)**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whiting</td>
<td>75.72</td>
</tr>
<tr>
<td>Mag. Carb.</td>
<td>9.53</td>
</tr>
<tr>
<td>Kingman</td>
<td>76.94</td>
</tr>
<tr>
<td>G. Kaolin</td>
<td>59.13</td>
</tr>
<tr>
<td>Flint</td>
<td>93.44</td>
</tr>
<tr>
<td>Blk. Iron</td>
<td>3.14</td>
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</tbody>
</table>

**Clear cone 9-11 (oxidation or reduction)**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Grams</th>
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</thead>
<tbody>
<tr>
<td>Custer</td>
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<tr>
<td>Kona F-4</td>
<td>20</td>
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<tr>
<td>Grolleg</td>
<td>16</td>
</tr>
<tr>
<td>Flint</td>
<td>25</td>
</tr>
<tr>
<td>Dolomite</td>
<td>5</td>
</tr>
<tr>
<td>G. Borate</td>
<td>20</td>
</tr>
<tr>
<td>Zinc</td>
<td>2</td>
</tr>
</tbody>
</table>

**Albany Slip cone 9-11 (oxidation or reduction)**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Grams</th>
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</thead>
<tbody>
<tr>
<td>Albany Slip</td>
<td>60</td>
</tr>
<tr>
<td>Red Iron Ox.</td>
<td>8</td>
</tr>
<tr>
<td>Neph. Sy.</td>
<td>16</td>
</tr>
<tr>
<td>Whiting</td>
<td>6</td>
</tr>
</tbody>
</table>

All three glazes required little special attention. They worked well dipped, poured or sprayed at a medium thick consistency.

For the raku work I used one clear glaze and tested copper carbonate and mason stains mixed with water only. The glaze recipe is as follows:

**Clear Raku cone 04-06**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gerstley Borate</td>
<td>80</td>
</tr>
<tr>
<td>Neph. Sy.</td>
<td>20</td>
</tr>
</tbody>
</table>

When using the copper carbonate and mason stains, I treated them as watercolors, mixing them with water and adding more or less water by sight according to the intensity of the color I wanted. The copper carbonate produced a range of colors from reds to metallics to greens. It is not as
stable a colorant as the mason stains which are made commercially.

The slips used on the split bowls were prepared by ball-milling the clay with water to a whipping cream thickness. To this I added mason stains according to the color desired. The ratio would be about 2 and 3/4 pounds of slip to 1/4 pound of stain. The stains fire quite true to color at low temperatures, so they can be mixed by sight.

For sawdust firing, I found that almost any combination of domestic or exotic hardwood sawdust was preferrable to soft wood sawdust. Hardwoods burn slower and may leave fire marks that would not result from the soft woods. By adding other materials such as tire tubing, motor oil and fruit skins, a mild to heavy reduction takes place wherever the combustible hits the pot. Sometimes the materials act to resist the fire and smoking, leaving irregular white areas on the pot.

The more I experimented with primitive firing methods, the more I understood how to control the surface color of the work.
VII. CONCLUSION
The inherent value of this experience goes well beyond the work completed for this thesis exhibition. I was unable to draw conclusions then; it seemed as though I had only begun to scratch the surface in understanding form.

Developing a clear expression through form is a life process that parallels personal development. The willingness to extend oneself, to take risks, is essential to living fully. It is through this process that one makes choices and defines the quality of life one wants to live. The work becomes the tangible reality of those choices.

A foundation from which to work, developed through experimentation, may be the most valuable thing gained from the graduate study period. I continue to draw on that experience in my current work and regard the time spent as an investment in Mary Roehm.

As I grow personally and professionally, the strength and clarity I strive to express through form becomes more consistently real. A line drawn quickly and without hesitation.
VIII. ENDNOTES

IX. BIBLIOGRAPHY


