Ceramic fountains

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CERAMIC FOUNTAINS

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Hobart Cowles
Frans Wildenhain
Lawrence Williams
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>iv</td>
</tr>
<tr>
<td>Discussion of Fountains</td>
<td>1</td>
</tr>
<tr>
<td>Technical Data</td>
<td>12</td>
</tr>
<tr>
<td>Illustrations</td>
<td>20</td>
</tr>
</tbody>
</table>
Everyone has his own idea of what should constitute a master's thesis; what he intends to put into it and what he expects to obtain from it. I began graduate work because I felt that I was not capable of standing on my own in the world of ceramics. My ideas and approaches to problems were direct adaptations of other potters. I realized this and yet I felt that I needed further instruction, perhaps not as intense as I had had previously. I also needed access to the materials and equipment with which to acquire additional experience.

It is a strange time in your life no matter what your age because your devotion is divided between your idea of a good student and that of a professional, not really belonging to either. This indecision, of which one you really are, adds
to the frustration but is a major part, I believe, of graduate work.

The thesis itself is so many things: it is a period of time; an expression of the material, the artisan, and the project or conceptual idea. It is all these things and yet none of them. What makes the thesis a success or failure is the attitude of the artisan towards his work and the growth and the development of this attitude. I believe my thesis to be a success because I am a potter now while I was a student when I started.
A fountain is a very complex concept. It is sculpture; sound, sight and movement of water. Anything containing or surrounded by water can be a fountain. The Japanese have expressed its simplicity in an overflowing basin. Complicated sculptural forms involved in dramatic action was the expression of the Baroque European. Modern fountains are geometric, figurative, a multiplicity of forms and movement of numerous sprays, or a standing sculpture in a still pond. As I started work my mind was flooded with endless possibilities.

In trying to limit myself so that some coherent action was feasible, I decided to confine the water supply problem by the use of a small recirculating pump. In addition, I decided to include the construction of a basin for each fountain and to make consideration of the environment an integral part
of my design. Later I was to change my mind concerning both the basin and the environment. An attempt to coordinate these three elements in the simplest manner was made in the first fountain. This piece consisted fundamentally of a rather geometric overflowing form and as organic basin. I believe it succeeds in integrating the basin and the form which is the source of water.

These first fountains were to be garden fountains. I wanted them to belong to their environment so precisely that they would be "found" among the plants. In these works the basin takes on a "rooty" or growth-like feeling to precipitate its integration with the foliage. It nearly takes the place of the environment itself. The third fountain does not include the basin and was intended to be placed in a sunken pond. All three of them were handbuilt from slabs or strips and take on a plant-like resemblance due to this construction technique as well as the environment
concept. They are faulty in their sculptural form. While there is a distinction between the base and the source of water form, throughout the entire piece there seems to be too even a cadence or rhythm in the surface form. In other words, there is no tension within the piece; there is no climax. Rather the technique is so repetitive that it is boring. I was not attentive enough and became mesmerized by the construction technique. However, not recognizing this at that point, I would have continued in the same vein had not the lack of kiln space prevented it.

Reversing my environment concept entirely, I decided to make small, interior, self-containing fountains. These could be placed on a mantle or table devoid of organic environment. I also changed my construction technique so that they were built of thrown pots, cut up and reassembled. To work in clay means to face problems in construction, drying, cracking, green strength, warping, and breaking. Because I was building
large forms and cutting them into pieces which were sometimes hollowed out, I had encountered all the above problems with each of the first fountains. The warping in the drying and firing of these sections was almost prohibitive. By changing my method of building, I could fire the fountains in this part of the series in their entirety. In addition to these changes I involved myself with trying to make the water do tricks, and with the dispute concerning the audible versus the visual aspects of the water.

I do not believe that the sound of the water and the sight of it need have equal consideration in any particular fountain. The placement of the fountain in the interior was sufficient reason for restricting the water flow and projecting the audible aspects. The first of these small fountains is completely closed and reveals the water not at all. The main criticism of this was that any form with a tape recording of running water in it would produce the same effect. Cynical as
this may seem this criticism has a great deal of merit. Is visual water the essential part of a fountain? I do not know the answer to this question. However, I abandoned for the time being the idea of a completely enclosed fountain.

Figures IV through VIII show the changes which occurred in the opening up of the forms as a means of exposing the water. In the enclosed fountain at least the forms of the wheel thrown objects have been subordinated to the new form of the fountain. However, in the others, especially the last ones, the thrown forms are much too prominent and the construction of them is overly obvious. I became engulfed in the prospect and necessity of showing the water. Like pointilism these were built up of small parts. But, there is no whole for the eye to grasp no matter how far away you can manage to get. These seemed to push the faults of the first fountains to a new dimension.

This problem, I believe, was not only the scale of the
parts involved but also the scale of the whole. The water had not sufficient room in which to flow and produce a mature sound or sight; thus all of these fountains were too small. I also found that even though the water was self-contained they needed an environment of some foliage to absorb part of the sound.

Previously I mentioned that the possibilities were endless. After six months of work I had reached a number of negative results. In working on a project of this sort negative results are often the case. It is frequently necessary to push a form too far in order to see its faults. I think I know what I do not want but can barely recognize what I do want. You must reach the point where you know you are not getting what you do not like. Then, I believe, it is a matter of being able to recognize the good when it occurs and to let it happen. The control, if there be any, which I have over my work is in the perceiving.

The last series of fountains is considerably different.
from the previous ones. I think they are more successful for several reasons. Another change in construction technique and a change in scale being the two major reasons. All eight of these fountains are a combination of handbuilding and thrown forms. This combination of techniques enabled me to change the scale of the parts as well as that of the whole. Heretofore I was amassing many units in order to make something large. However a large form has a character of its own which can only be found by making a single big form.

The fountains in figures IX through XII can be seen to take on an animated or bird-like quality. The sight of the water assumes a subordinate role; yet the entire complex of forms appropriates the feeling of being made solely for this stream of water. In the prior fountains the water always seemed to be alien; but now it is serving its function in the forms.

With the advent of the rectangular and pipe-like forms, the fountains took on an architectural aspect. A tension is
formed between this architectural feeling and the organic or
growth-like feeling of the thrown forms. The rectangles, while
rich in detail, read as a massive form and give the viewer's
eye a large plane on which to rest. The opposition between the
excitement created for the eye by the thrown forms and the
respite of the large planes produces a stimulating effect.
Note this development in figures XIII through XVI.

The most obvious difference in these last fountains is
that I am beginning to feel comfortable with the pump, the water,
but most important with the clay and technique itself. Earlier
I mentioned that the important outcome of a thesis was the
artisan's attitude towards his work. I believe that you find
your really creative ideas outside your media. And it is the
way you assimilate these ideas into your media which becomes
your "style". Additional experience enables the incorporation
of ideas to occur with greater ease. Soon you start to "speak"
in the media. I believe this is beginning to happen with me.
I am approaching my work more intuitively.

Any discussion of color has been avoided heretofore because I regard my development in glaze technique considerably lagging behind my construction technique. I believe this to be a consequence of the media. It is also one of the things which makes ceramics so fascinating. When you make a pot there is an immediate reaction to the product; however, when glazing there is a time lag of several days. It is difficult to obtain an unconscious knowledge in glaze action because of this. Also, most bad pots are destroyed before they reach the glaze stage. Being faced by the best pots when approaching the glazing has an extraordinarily inhibiting effect. More inhibition is created when once you have glazed the clay surface you realize it is lost forever. When glazing I seem overly conscious of what I am doing and afraid of spoiling what I have. The glaze effects observed in the photographs are rather conservative due to this inhibition.
Perhaps...sculpture need not have color? Working in the ceramic media was reason enough for me to feel a responsibility to glaze. The use of at least some glazed areas was suggested to me by the flowing and wet properties of water. I desire to be able to use glaze as a painter uses paint. Not that I want to simulate paint, but rather I want to have the subtlety of color and the character of glaze. This takes a great many negative as well as positive results and much experience.

The use of fountains as a thesis problem has been very informative while intensely frustrating. In choosing an excessively open problem there has been little tradition on which to base my decisions. This occurred not only in terms of ceramic form but also in the employment of the water and the glaze. Questions have arisen as to whether sculpture should be colored; whether, from a structural point of view, fountains should be ceramic; whether it is advisable to build this large in clay; and whether the water must be visible. It has been
difficult for me to imagine how to use my experience in glazing
pots while glazing forms entirely different in size and func-
tional concept. I have made numerous mistakes, some reasonable,
others preposterous. I think, though, I have come away with a
little less fear and timidity and contrivance in my work.
My choice of a clay body was based on a need for the body to have a great deal of strength in the green stage, to dry well and not be too brittle for moving to the kiln. It had to have plasticity so that it threw well and also be flexible so that I could build thinly. It had to have a warm but light color so that it would take glaze without effecting the color a great deal. The recipe I used is as follows:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. P. Green fire clay</td>
<td>40</td>
</tr>
<tr>
<td>Tennessee #5 ball clay</td>
<td>20</td>
</tr>
<tr>
<td>XX Saggar fire clay</td>
<td>20</td>
</tr>
<tr>
<td>Kingman Feldspar</td>
<td>10</td>
</tr>
<tr>
<td>Flint</td>
<td>10</td>
</tr>
<tr>
<td>Bentonite</td>
<td>3%</td>
</tr>
<tr>
<td>Red Iron Oxide</td>
<td>1%</td>
</tr>
<tr>
<td>Grog (medium)</td>
<td>15%</td>
</tr>
</tbody>
</table>

I fired this body to cone 5 in the first nine fountains.
and used stoneware glazes. It behaved fairly well especially in the smaller fountains. However when building the last eight larger fountains I decided to fire to cone 04 in order to reduce the cracking and strain on the clay produced by the size and forms of these last ones. An unfortunate side effect in firing lower as far as fountains are concerned in that they are very absorbent. A solution I found I could live with was to glaze the surfaces near the water which reduced the absorption. In other cases once the fountain was saturated there was no longer a problem. Only if the fountain was outside in the cold do I believe this absorbent quality would cause it to crack and break with temperature changes which would normally not effect ceramics.

The first three fountains were strip built in the usual manner. With the smaller fountains I cut up thrown pots and tried to assemble them into a whole something other than the form of the pots. I tried to cut the pots up vertically and use
the inside surface as well as the outside in order to lose the "feeling" of the pot. I found I had to throw at least three times as many pots as I needed in order to have enough size and shape differences to work with. The best pot forms were vase or bottle forms because the "complete body" shape was easiest to paddle and deal with. The rims and feet were kept simple because the complex shapes seemed to look strange and "read" too much like a pot. However, in the small ones, particularly the last of these, I got carried away with the pots and lost the feeling of a whole.

One of the problems that came up with the linear, bird-like forms was the supporting of the appendages with stilts and fire-bricks while working on them. Numbers XI and XII I raised the problem of having to cut the tubular forms in order to transport to the kiln and to fire without their collapsing. I learned to build a collar inside the tubes where they were cut so that they could be fitted when they were glued. Also
this collar added support to the glue joint. These were difficult to visualize in the glazing because they were in sections which had to be glued to be seen.

In building the large rectangles of the last four fountains, I found an unusual work pattern that seemed very satisfactory. Late the first day I would roll out the large slabs which would constitute the box and cover them lightly with plastic. The next morning on a large board I would join the sides to one of the large surfaces supporting them with fire brick. This was left exposed to the air to stiffen. I would then throw the pots I needed to carry out my concept. In the afternoon I built a brick and board support inside the box and flipped the other large surface on top of this joining it to the sides. This I covered overnight. The next morning I removed the bricks and boards and using the large board that the box was built on as a lever and support, flip the box onto a slab which became the bottom. My pots were then leather hard.
and I spent the rest of the day paddling, cutting and shaping them. I would join them to the box and finish the fountain before I left that night.

This may seem an exceptionally fast way to work, but I found it very suitable to my personality. I also feel I reduced the chances of cracking a great deal by having the entire piece a uniform wetness and letting the whole thing dry naturally in the air. It seems to suit me better at this time to build fast and produce a number of pieces rather than to play with and change one form. While clay can be kept wet a long time, this way of working suits the media in some respects and retains a spontaneous surface quality which I find very nice.

Most of the last fountains were glazed with a variation of one of two glazes. The recipes are as follows:

<table>
<thead>
<tr>
<th>K-6^1</th>
<th>Rhodes #8^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Lead</td>
<td>27</td>
</tr>
<tr>
<td>Whiting</td>
<td>4</td>
</tr>
<tr>
<td>Borax</td>
<td>15</td>
</tr>
<tr>
<td>Material</td>
<td>Amount</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Elbrook Feldspar</td>
<td>18</td>
</tr>
<tr>
<td>Flint</td>
<td>18</td>
</tr>
<tr>
<td>Rutile</td>
<td>5</td>
</tr>
<tr>
<td>Zircopax</td>
<td>20</td>
</tr>
<tr>
<td>Brown</td>
<td></td>
</tr>
<tr>
<td>Red Iron Oxide</td>
<td>10</td>
</tr>
<tr>
<td>Whiting</td>
<td>13</td>
</tr>
<tr>
<td>Barium Carbonate</td>
<td>13</td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>4</td>
</tr>
<tr>
<td>Dark Brown</td>
<td></td>
</tr>
<tr>
<td>Red Iron Oxide</td>
<td>8</td>
</tr>
<tr>
<td>Manganese Dioxide</td>
<td>1.5</td>
</tr>
<tr>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>Copper Carbonate</td>
<td>3</td>
</tr>
<tr>
<td>Cobalt Carbonate</td>
<td>.75</td>
</tr>
<tr>
<td>Manganese Dioxide</td>
<td>.5</td>
</tr>
<tr>
<td>Purple</td>
<td></td>
</tr>
<tr>
<td>Cobalt Carbonate</td>
<td>2</td>
</tr>
<tr>
<td>Manganese Dioxide</td>
<td>8</td>
</tr>
</tbody>
</table>

The Rhodes #8 glaze, if applied thinly, gave a rather dry surface which made a nice effect with the water. I usually applied the glaze with a spray gun. Also I was able to pour some of the surfaces by making a temporary basin with a large sheet of plastic. Occasionally I left the light clay body exposed or stained it with red iron oxide which produced

a purplish color due to the low firing temperature. The first nine pieces were heavily reduced at cone 5 in the 12 cubic foot up-draft Alpine or in the down-draft kiln. However, as stated before, to prevent excessive cracking the last eight fountains were fired at cone 04 in the 30 cubic foot up-draft Alpine kiln. I attempted to maintain an oxidizing atmosphere due to the use of the lead glazes.

A small, plastic-incased recirculating pump was used throughout the fountain series.

Little Giant Pump Company
Oklahoma City, Oklahoma
Model no. 1

In the constructing of the fountains it is important to keep the shrinkage of the clay in mind when making the housing for the pump. Also you must remember the hole for the electric cord; and there must be a passage so that the water can reach the pump. When installing the pump flexible plastic tubing was used. I found the use of hard plastic "Y's" the best
solution when it was necessary to split the water flow.

If a piece broke in the green stage I used kiln cement to repair it and then glazed over it. When there was a clean break in a finished piece I used Glass and Ceramic Adhesive by Dow Corning. Silastic Clear Sealer by Dow Corning was used to make water tight repairs. It was also used to seal a baby nipple around the inside of the hole for the electric cord. I found the best glue for assembling the large sections of the fountains was Fyber Flexible Auto Body Paste which I colored with oxides to match my glaze colors. It dries fast, fills well and is quite strong.
Figure I  4 feet high

Figure II  5 feet high
Figure III
15 inches high

Figure IVa 18 inches high

Figure IVb
Figure V 20 inches high

Figure VI 14 inches high
Figure Xa  30 inches high

Figure Xb

Figure XIa  4 feet high

Figure XIb
Figure XIIa  3 feet high

Figure XIIb
Figure XIII 34 inches high

Figure XIVa 36 inches high  Figure XIVb
Figure XV 4 feet high

Figure XVI 26 inches high