People seem impressed when told that Rubin casts his own work at his own foundry. They probably have visions of high tech equipment, motorized lifts and a big staff. When I began helping in the foundry in 1979, it was basically a few sheds with very basic tools, mostly fabricated by Rubin.

I always said it was his knowledge that actually made the foundry. At that time he was using investment molds for casting, which had not changed much since the Bronze Age. Investment casting was complicated. In starting a small sculpture, such as the cube, the wax original would be covered in dozens of sprews in order for the molten bronze to flow through them into the form. The mold that held the original wax was made of plaster and clay, was several times larger than the wax it held, heavy, and had to spend a week in a gas fired kiln. Rubin would build the kiln out of fire bricks around the molds that were to be cast.

During that week, Rubin had to keep a vigilant eye on everything, adjusting the temperature, gradually increasing the heat until finally all the wax had burned out. After they cooled, he would take the kiln apart brick by brick. Once the bronze was poured, the molds had to be chipped and hammered off, leaving the bronze sculpture. The finishing process was very labor intensive. The sprews, which surrounded the piece like a cage had to be ground off. Then the finish work could begin.

In 1980, Rubin was introduced to the shell coat method of casting and it changed everything. It involved coating the wax with slurry, about the consistency of a milkshake, rolling it in several grades of special sand over and over until the casting mold was formed.

The shell method did away with the spider web of sprews and usually there was only need for one sprew at the top of the mold. The main obstacle was keeping the slurry from hardening. It had to be stirred constantly 24 hours to keep it from setting up. Frank Colson of Sarasota, Florida, discovered a suspension additive used in the food industry and it worked in the slurry. This breakthrough made everything a bit simpler. Also, Rubin was introduced to other space age materials that transformed the furnace and eliminated the use of the brick kiln. What had taken a week, now only took
about 30 minutes. The old kiln burned all the wax, but the new burn-out furnace let us retrieve about 1/3rd of the wax for reuse. However, even though the casting process had become a little less complicated, the finishing work was still demanding. Hours of grinding, welding, banging, and more grinding would finally render a beautiful new sculpture. But, that is not the end. The chemicals for the patina had to be applied and finally the piece could have the final step of applying wax to protect the finish. Then, dealing with delivery, the proper pedestal and actual installment of the sculpture was another job, which took a lot of coordination, planning and just plain effort.

Artist Henrietta Near photographed the casting process. She printed beautiful black and white photographs showing a step by step story of bronze casting. She was invited to exhibit her photographs at Washington and Lee University in Lexington, Virginia. Rubin gave a lecture and presented a slide show to accompany the photo exhibit. The auditorium was filled. At one point during the lecture, Rubin paused and said, “Now we are half way through the process.” The whole auditorium groaned. If there were any aspiring sculptors in the student body attending the talk, perhaps they changed their minds that day.

I helped a little with wax work and, also, helped pour the molten bronze. Once Rubin taught me what he needed me to do, it was like a dance. We rarely talked during the process, but instinctively moved through the castings. I joked that he was the brain and I was the brawn. We poured thousands of pounds of bronze over the 20 years that I worked at the Aylett Art Foundry. We did wear aprons, hats, jackets and face masks but they were not true foundry protective clothing. I feel most proud that during those years of very dangerous work we never had an injury or burn. I credit part of that to the fact that Rubin really knows what he’s doing. Holding the crucible in its pouring shank is like having a miniature personal volcano in your hands. Rubin often said, “Once you look into the crucible you are never the same.”

Rubin is driven by a relentless passion to produce sculpture. There are many other media that would have been an easier road to producing art work, but bronze spoke to Rubin. His untiring dedication is evident in the hundreds of sculptures he has made.
Preparing wax segments of “Pentangle”

Photo Credit: Henrietta Near
Kevin Brown, my foundry assistant through many bronze projects, pouring one bronze segment of “Pentangle”.

A cast segment and the cooling process.

Here’s a segment of the sculpture after a portion of the shell has been removed.

Several weeks after the various segments are cleaned and the welding process begins.
Surface finishing
Applying a patina