

Cass Carl

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Space Form and Process Fall 2020

Mold Making and Casting

**Objective: Experience the process of creating a mold and casting an object from that mold, experimenting with materials and process to achieve a desired outcome**



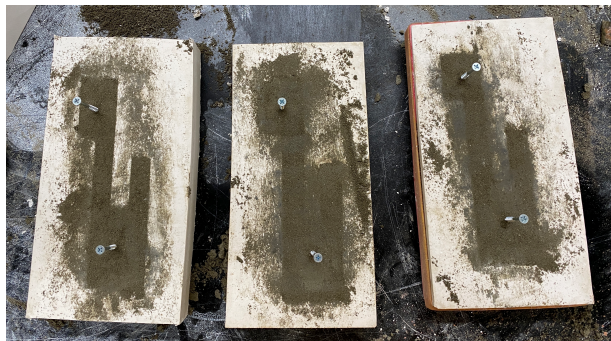
Casting is one of the single most common methods of production. There are endless examples of objects produced from molds all around us every day. Almost everything fabricated from plastic is casted from an injection mold and the single most used material, concrete, must be cast by nature. It is not always apparent how widespread and common production method is but without it our world would be drastically different.

## Part 1 – Introduction and Experimentation

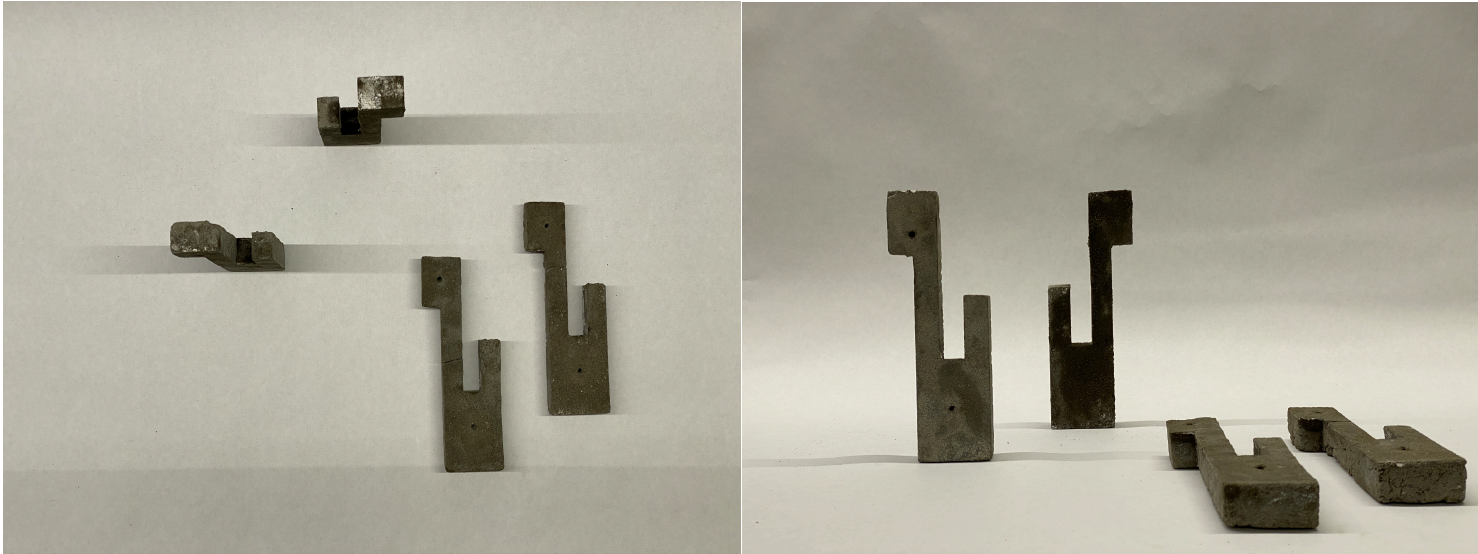
We began by experimenting with the process of mold making and casting with simple objects. I created a two part mold of a ball of clay out of plaster and cast wax in the mold to make a misshapen sphere of red wax which I failed to document. This process was important as baseline for further exploration and an introduction to materials and process of casting in plaster.

## Part 2 – Final (iteration)

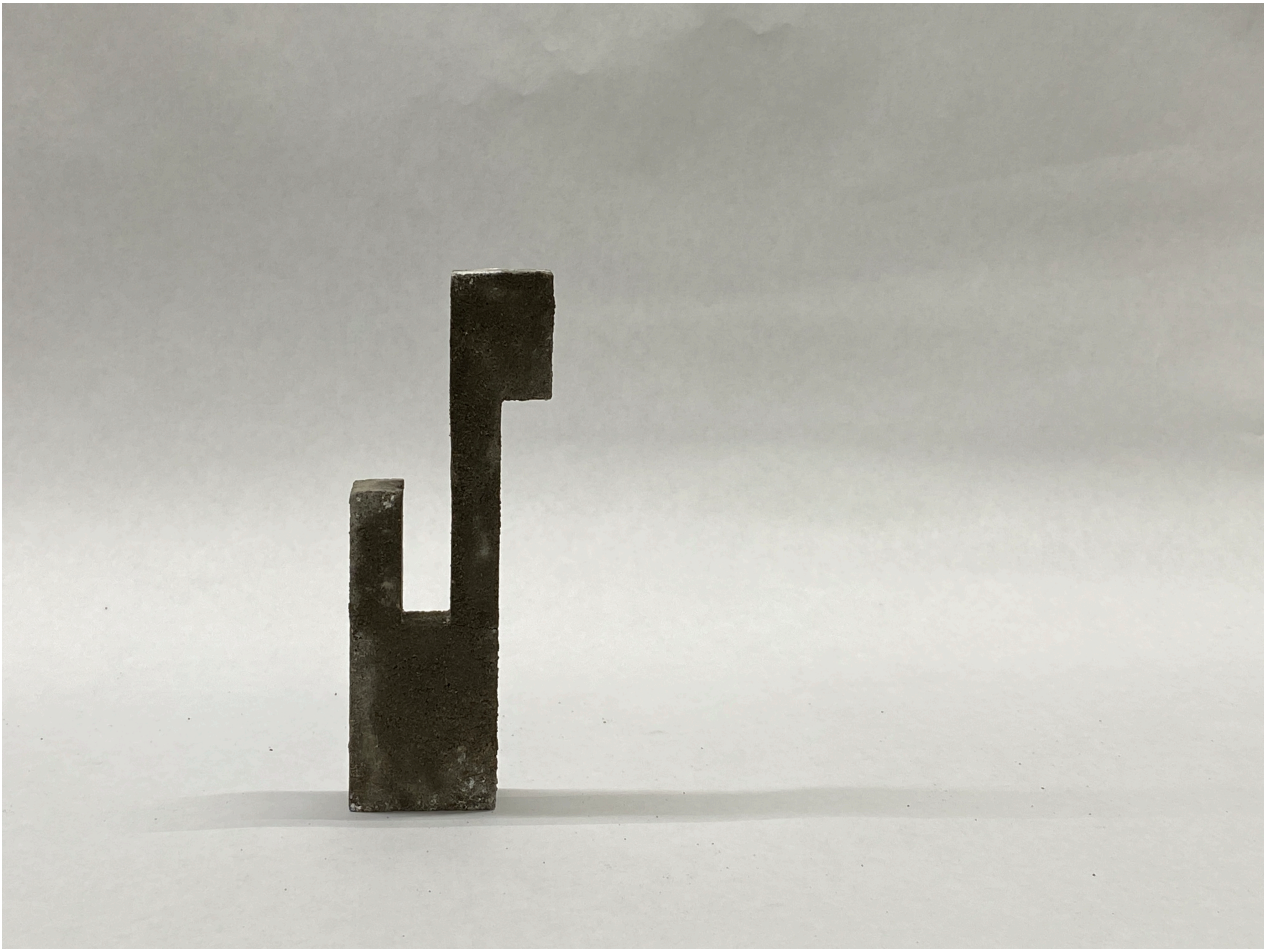
For my final mold I created a small sculpture from plywood using the golden ratio and cast it in plaster. I decided i wanted to use concrete for my final product and filled the set plaster mold with wet concrete. My first cast was wasted however after I attempted to prematurely demold the concrete. At this step I came to the conclusion that is could be difficult to demold future casts and prepared for this my making two more replica plaster molds. I filled all three molds with concrete and let them set for three days. My assumptions proved correct and demolding these casts was very difficult. All three Plaster molds were wasted in my attempt to recover the concrete casts and two of the casts broke during this process. I was unsatisfied with my result as I also discovered my concrete pour was very flawed and retained many air bubbles creating a very uneven surface. I also worried about the fragility of the long section of the sculpture that had not survived two of the three demolding processes.







**Final Casting:**



For my final cast I changed the mold design from an imprint mold with an exposed upper face to an exterior outline mold with both the upper and lower faces of the object exposed. This design helped in both the application of concrete to the mold to produce the clean edges i wanted as well as the demolding process. I also embedded metal wiring into the longer shaft of the sculpture to provide more structural integrity.

### **What Would I Do Differently?**

The main thing I would change about my process in repetition would be the mold material. Plaster was far from ideal for what i was attempting primarily due to the material i chose. The concrete cast proved to be very difficult to demold from the plaster making none of my molds reusable and this entire process much more tedious. In hindsight i should have opted for a silicone or wooden mold but I am glad to have gotten the experience working with entirely new materials. I am happy with my final outcome and I especially like the raw concrete and clean edges of my final work.

