Ceramic Art: The Ability to Transgress Time

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Abstract. Being comprised of specific minerals and earthen materials, clay has been used throughout history to create art. What distinguishes clay from any other material is its resistance to decay. Through the ceramic firing process, the earthen matter releases their physical and chemical water molecules, reducing the material to a hardened substance. The higher the temperature the denser the material becomes allowing for a lifetime spanning millenniums. In either of these states, clay or ceramic, the materials used would never be able to deteriorate through any biological reduction. This comparison of time and process allows for my metaphorical interpretation of ceramics as fossils. When referencing fossilized matter, its process holds a direct correlation to time. A fossil is a representation of a history, a memory into our past. Once clay has been properly vitrified in a ceramic vessel, I am metaphorically interpreting it as a fossilized remnant of its original mineral structure. When clay is formed into ceramic works of art, a fossilization of nature's own resources occurs; creating a timeline of historic memories, visions, and the evolution of human perception.

1. Introduction

Discovering ceramics during my eight grade art class proved to be the greatest revelation in my life. I have always been astounded by each of the physical properties of clay from wet to vitrified wares. As time progressed and my knowledge increased my artwork seem want to exploit that process. Ceramics is one of the oldest recorded forms of art and has maintained its foundation throughout history for it ability to resist natural destruction. Even if the integrity of a piece of ceramics is destroyed, the shards which remain are still resistant to forms of biological reduction. Instead these remnants become essentially rocks that are then tucked away beneath the earth's surface. Without this level of preservation, ceramics would lose most of its appeal and become another failed attempt at creating art. It has been my willingness to learn and embrace this level of permanence that fuels my energy to create and add to the history of ceramics.

2. Experiment, Results, Discussion, Significance

Upon entering graduate school, I immediately decided to revisit the bare processes of ceramics and the creation of wares. Since approximately 24000 BC, cultures have used the earth to create decorative art and ceremonial figurines to enliven their surrounding atmosphere. 9000-10000BC is considered the approximate timeline for the beginning of functional vessels used to store food and water. By quickly learning the properties of the finer particles of dirt, clay became a tool to enhance any of the society's daily tasks. Considering the conditions of clay as being water soluble, it was determine that through the use of heat that clay would harden enough to allow for continual use. This process is now known as bisque firing. It has translated into the first hardening process used in modern day ceramics. By firing the clay up to a temperature of about 1100 degrees, the physical and chemical water of clay burns away and we are left with the mineral and organic materials. This process is commonly defined as quartz inversion. Around 5000 BC, the development of glazes redefined the surface qualities of ceramics. Glaze allowed the creation of a glassy, glossy surface that prevented any leaching into the surface of the clay. As we continue our journey through history, time moves forward into the continued development and refinement of ceramics. It became apparent that with the discovery and application of fire to clay that the surface would no longer dissolve in water. The downfall to the surface was it would still continue to retain liquid. New firing methods were created that devised methods for which to achieve higher temperatures. At these higher temperatures, the clay began to lose its levels of water retention by shrinking it surface area and creating a denser mass. These stages of shrinkage and lack of absorption is defined as vitrification. Within the history of ceramics, we owe most of our modern developments and techniques to the Chinese. About 1500 BC, the Chinese devised a firing method that would become defined as high fired ceramics. Reaching temperatures around 2400, they found ways to compress the surfaces of clay that would almost completely prevent water retention. In China as early as 600 AD, the development of wood firing became a prevalent method of vitrification. This would not only solidify the surface at the high fired temperatures but also provide a glassy surface to the clay from melted ash of the woods in the kiln.

Due to these methods,ceramics had found its sustainable power and ageless presence. Today we continue to use many of the techniques and firing methods developed by the Chinese while continuing to redefine the world of contemporary ceramics. Comprehending the potential of hardening of clay, the density of the material solidifies into essentially a mineral remnant of its previous soft states. Using the high firing process, clay can reach a vitrified state similar to that of many calcified objects. This correlation provides the material with irrevocable qualities that prevent all forms of organic disintegration. Comparing bones and fired ceramic wares, we can find similar mineral compounds arranged in many different manners. Of course, bone ash and calcium is often a common property in clay that aids in its vitrification. Fossilized bones are typically preserved through permineralization, which allows water to permeate the porous surface structure. The water then precipitates out and solidifies the bones mineral core. Both of the processes produce effective results that allow the material to retain its form for centuries. It is only through the metaphor of fossilizing ceramics that the prevalence relates. Although both materials are stripped of particular elemental properties, the porous nature of fossils allows the material to retain it brittle and delicate nature. Clay, on the other hand, as it transforms into vitrified ceramics loses most of its porosity. In addition, high fired ceramics holds a significantly higher level of refractory materials than bones. If placed into the same atmosphere, bone would melt into a glassy puddle. The process of firing is only meant to remove the physical and chemical characteristics of water in the clays surface. Fossilized bone often has many of its organic material remove so as only to leave the hardest of minerals. Yet the intrigue twors the comparison remains just as valuable to my development of artwork in the field of ceramics. By creating works that may potentially look like preserved bone structures, I can appropriately amplify the topic of discussion. The work becomes important for its process and permanence rather than its direct correlation with bone.

3. Conclusion

While firing my art, I often never realize the intensity of it process and the delicate nature in which I must proceed. Even though my end result often yields a hardened refractory surface, the material is not indestructible. The techniques of high fired ceramics are never flawless and it those attention to details that create the best results. In vconjunction to its process we are never to stry to far from the history of ceramics. Without that record of preservative techniques the luster of ceramics would immediately diminish. Fossils provide the nearly same effect to those involved in the excavation. These bones are relics of a history that one can only imagine. Their ability to open a window into the past reveals more about a process and time than even ceramics. As with ceramics, not every bone that has the ability to become a fossil survives the permineralization process. Then there are the ones that may survive but can't be removed without irreversible damage. Even though the physical nature of the materials is relatively different, the area in which they are developed is never perfect. End results become prevalent due to habitual investigation of material and a complete understanding of the organic structure. Without either of these processes, the result would lose much of their glamour and become a partially mundane object. It is with that process and importance of history that continues reinterpret our comprehension of an immortal object.