What, then, are space and time? Are they real existences? Are they only determinations or relations of things, yet such as would belong to things even if they were not intuited? Or are space and time such that they belong only to the form of intuition, and therefore to the subjective constitution of our mind, apart from which they could not be ascribed to anything whatsoever?

Immanuel Kant, *Critique of Pure Reason*
Introduction

Humans are complex, imaginative, and explorative beings. We are investigators, travelers, builders, and lovers. We create and destroy—build and tear down—come together and fall apart.

We are thinkers and doers, and we are determined to locate our exact physical and philosophical place within the universe. Nous, or Mind, is a philosophical term introduced by the Greeks, which describes what enables our intellect, and is necessary for our understanding of what is true or real. Nous exists in a space that is between the real, tangible, physical world and the world that exists only within the complex, confines of the brain—our imagination. I am interested in the dichotomy between investigation and imagination, and the physical world and the imaginary world and where these concepts and places converge within the spectrum of visual art. Through geology, astrophysics, metaphysics, and ontology, I explore the making process, materials, deconstruction/reconstruction, human nature, and chance.

The objects I make are abstracted physical representations of the abstract concept of thought and imagination, and symbolize the space where ‘Being’ exists—between what is real and what is unreal. Martin Heidegger uses the German term ‘Dasein,’ and ‘Seiend’ which translate into English as, ‘Being,’ in his essay “Being and Time,” from 1927. As explained by Simon Critchley from “Being and Time, part 1: Why Heidegger Matters,”

‘Being’ is not something like a being. Being, Heidegger claims, is ‘what determines beings as beings, that in terms of which beings are already understood.’ In other words, being is
distinguished from beings such as physical objects or even, as Heidegger explains in his
discussion of the ‘worldhood of the World,’ that entire collection of things that constitutes
the physical universe. To preserve Heidegger’s distinction, translators usually render ‘Sein’ as
‘being’, the gerund of ‘to be’, and ‘Seiend’ (singular) and ‘Seiendes’ (plural) as the verb-
derived noun ‘a being’ and ‘beings,’ and occasionally, perhaps preferably, as ‘an entity’ and
‘entities’. [sic] (24)

The philosophical concept of the Void is referenced as the void spaces within my work.
Heidegger would have understood the Void as a clearing or a space that enables the presence of, or
the bringing forth of something—which is how we can begin to find the alêtheia (truth) of Being.
The inner content is something that is not immediately apparent, but requires an opening, a space,
in which to be drawn out, where it can then be communicated and possibly understood.

Anaxagoras held that everything is infinitely divisible and that even the smallest portion of
matter contains some of each element. (Russell 62) Although unsupportive of the concept of the
Void, which began appearing in philosophy in the fourth book of Aristotle’s “Physica,” I ask this:
could the Being—the thing that separates us from other sentient beings and allows us our
complexity—exist within the Void? If the ‘Being’ resides within our bodies, could there be void
space within us? It is here the discussion begins; with what is ‘Being,’ what is its purpose, and where
does it exist? There is much about the world and our own mental physiology that we do not know.
According to Heidegger, “it is said that ‘Being’ is the most universal and the emptiest of concepts. As
such it resists every attempt at definition” (Heidegger 22). I explore these questions through my
sculptures by depicting the space where the soul lives,; within a mass of earth, surrounded by the
elements that forge our bodies and make us what and who we are.
Stand still, you ever-moving spheres of heaven.
That time may cease, and midnight never come
Christopher Marlowe, *Doctor Faustus*

Art is my calling. Though I tried, nothing else satiated my curiosity and inherent need for a challenge. I have also been intrigued by human nature my entire life; I’ve always been an observer—gazing from afar, wishing somehow to connect. I thought that if I studied people, their behaviors and patterns, maybe along the way in my search for connection, I would learn of the soul to find out where it resides and if it continues on after death.

I decided to bridge my interests, and to use art as a way to search for the soul. I am unsure whether or not I have found it—for I feel one does not truly find the soul until one is truly dying. It is so hard to put an end to the human ego. But what if after death our energies—our souls—continue on and are somehow connected to the physical world; tied to the forces of gravity, free to move about like neutrons and protons and to eventually become other living things? If every molecule in our universe is in a constant state of never-ending motion, could the same not be true for our souls?

On this plane of existence, everything is connected. There is no void. Between each thing, are more things between. The entirety of our known universe is contained within a single molecule
flowing down a river, within another world, all of which we will never know. The universe expands trillions of times in every conceivable direction—both macroscopically and microscopically. Will we ever know what actually exists? How do we know the true amount of intellect that is living right now? Will we ever be able to observe it?

I think everything is connected—both the real and the not—my aim is to draw parallels between the objects I make and the philosophy I study. I will be discussing my material choices, my process and technique, how these were inspired by geology, cosmology, and astrophysics, and how these tangible choices are connected to Aristotle’s philosophical concepts of the Void, and Martin Heidegger’s theory of Being. From here, I start with Material; to begin with the technical is to build on a physical foundation, of which then philosophy can grow.
Material

Return to nature. That is to say, re-examine the source. Nature is the realm of infinity where one can continuously bring one’s self back to nothingness. One can limit or define one’s self in the midst of this realm of the undefined or infinite. Staring at the depths of self negation [sic] is the true recognition of history; this is the starting point where one can be transformed.

Lee Ufan, sculptor

To begin building, I drew inspiration from an experimental metal casting technique I learned during my undergraduate studies. I would construct a wooden box and fill it with different materials: rocks, other pieces of wood, nails, shells, or other organic objects or materials. These things would take up space and as I poured molten aluminum into the box, it would surround these materials. Some were later removed, creating void spaces and complex, unique textures within the surface of the aluminum. The aluminum itself would burn the first few layers of the wood mold, bubbling and cratering and making textures that had existed only within my dreams. I was mystified by the results—eager to try it again and again, and again. After leaving that place, I was faced with a challenge: to create something new that had never been seen before. I wondered: how can this metal casting technique be transferred to clay, my new favorite material? To achieve similar results, I replaced molten aluminum with casting slip, the rocks and nails with paper and wool, and I kept the wood box mold to see how its texture would translate to ceramic. After many attempts, I settled on a building technique that allows for replicative results.

Currently my work begins with the forms being cast in plaster molds through the layering of different clay bodies. As the clay is layered, highly textured organic materials and powdered glazes are placed along the edges of the mold and through the center of the form. These materials leave unique colors, textures, and void spaces within the surface of the clay. The clay I use is liquefied. It
remembers every fold, bump and wrinkle, and conforms to each shape effortlessly. Chemical and thermodynamic reactions during the kiln firing process cause the organic materials to disintegrate and the ceramic materials to melt and then harden; creating moments of discovery deep within these forms. After firing, layers of clay and remnants of materials are left, imprinted with the permanent evidence of existence and absence.

I’ve chosen to work with ceramics because of its versatility and complexity, and I’ve chosen to work with casting slip for its ability to imitate and hold delicate textures. The sculptures I make vary in size, shape, and detail; however, I use the same palette of materials for each form. I build the objects in either plaster molds or in pre-made forms, like concrete forming tubes, which are typically used in the construction of building foundations. Within the mold, I alternately layer two different casting slips, and as the slip is solidifying to the side of the mold, I press crumpled paper, steel wool, aluminum foil, soda ash, copper, granular ilmenite, and saw dust along the edge. During the kiln firing process, the organic materials disintegrate or burn out. Chemical and thermodynamic reactions between these materials and the clay cause a variety of colors, textures, and void spaces to appear.

Two different casting slips are used; the first is very plastic and dense, and is a warm brown to dark grey color when fired and is designated “slip x.” The second casting slip is porcelain, less dense, and is a bright white color, and is designated “slip y.” Casting slip is a liquefied clay that is typically used for making functional ware and small objects. Casting slip works well for this type of building technique because it is liquefied; it has the ability to seep into small areas to capture delicate information that may otherwise become lost. Casting slip is a unique material in that it requires a
deflocculant, or electrolyte, causing them to repel one another. Because of the deflocculant, very little water is necessary for the particles to become suspended.

During the making process, the two casting slip bodies are alternately poured around the found materials. Bits of dried casting slip, glaze, and other clay bodies are added to the mold before pouring, causing the slip to respond by surrounding the pieces to forever hold them in place. The casting slips blend and roll; pushing wet slip over dried slip, up the sides of the mold, and around other materials creating ripples and folds across the surface of the object. After the first firing, these materials go through various chemical changes and some of the materials burn away completely. What remains is a solid form with textures and void spaces throughout. The surface of the form is imagined but is inspired by: the surface of the earth, cross sections of mountains and hills, the braided sand of river and ocean beds, and from what could be found in a distant corner of space. Combustible materials, metal shavings, and other pure materials, like cryolite, soda ash, and pearl ash are placed along the edges of the mold. Each of these materials reacts uniquely to the clay. Cryolite develops a wrinkly skin and turns cream in oxidation and a variation of browns, blues, and greens in reduction. Soda ash is as predictable as a quark, randomly changing anywhere from a milky, matte white to a blue that is as bright as lapis lazuli. Pearl ash is made up of tiny white beads that are remembered by the clay but is dissolved and absorbed by the water, leaving behind a hollow, bumpy cave.

After the form has been fired to cone 07, and the organic materials have been removed, black underglaze and red iron oxide are rubbed into the surface and then sponged off the raised texture. Depth is instantly produced. Glazes and pure ceramic materials such as cryolite, lithium, and frit 3134 are applied to the surface. Each has its own properties; cryolite bubbles and turns rough and
reveals deep browns and blues, lithium becomes smooth and shimmers silver in the light, and frit 3134 marbles opaque white and translucent clear with random little patches of blue. All of these materials either become layered on the surface or coat the jagged sides of the void spaces.

I use four different clay bodies, five glazes, five combustible materials and three non-combustible materials in each sculpture. Typically with ceramic sculpture, only one clay body is used, and any other material would be pressed into the surface of the clay, instead of imbedded. Sculptures are built this way because most often, different clay bodies that are mixed together will separate or crack during the firing process, ruining the work. However, I am recreating earth. Planetary geologic processes mix and layer sediment and to imitate this, using more than one clay body is necessary. I seek to equal the level of complexity in my work that is found in nature.

Firing

Building solid creates an issue when firing the work. Most ceramic work does not exceed one inch thickness and is completely bone dry when it goes through the first firing process. If the objects are fired when they are too wet, trapped water in the clay flashes to steam, creating pressure which must be released in some way. Typically, an explosion is created and the object is destroyed. If the explosion is not severe, the piece may be salvaged and at times this works to my advantage; cracks and fissures appear, further resembling earth’s caves and crevasses.

Much like natural thermodynamic processes that change the composition of stone, like obsidian which requires massive amounts of heat to exist, ceramic work is fired in a kiln in order to change its chemical composition from a malleable substance into a hard stone. Two separate firings
are usually done, the first is to cone 07, which removes carbonaceous materials and prepares the clay for the addition of glaze, underglazes, and oxides. The second firing turns clay into stone and glaze into glass. The firing process is fascinating. Heat from the burners snakes through the kiln; particles of clay bend and squeeze, bonding with each other permanently. Chemical changes within the clay happen around 500 °F and at 1200 °F when the clay goes through quartz inversion and cristobalite inversion. During these times, ceramic material is turning back to stone and glazes begin to compress against the clay walls. The temperature and atmosphere in the kiln determine the color and opacity of the ceramic materials and glazes. If the ratio of fuel and oxygen vary, so will the results. All of my work is fired to cone 6 reduction, which is about 2250 °F. Reduction is a term that means the work was fired in a gas fueled kiln, where the amount of fuel is at a higher percentage than the amount of oxygen. This firing process give rich, bold, varied glaze colors and turns porcelain clay bodies slightly brown and grey with flashes of varying bright orange and red.

**Process & Method**

By using two different casting slips, challenges emerge during the building process. Both slips set up at different speeds, slip x sets after 10 hours, and slip y sets after about 24. If slip x is poured in first, slip y is easily added as its lighter viscosity, and the high surface tension of slip x, allows it to gently roll itself over and around the curves and folds of the materials below. If slip y is added first and has not had adequate time to set, slip x will displace slip y, causing the still liquefied portion to push up the sides of the mold, producing inimitable results.
I developed casting slip x from a porcelain throwing body. I wanted a casting slip that would not only be very plastic but would also pick up very fine, delicate details and textures. Having a dense, plastic slip allows for better solid casting, as it is much more forgiving and can be manipulated long after the form has been cast and removed from the mold. It also resists cracking, during both the greenware stage, and during firing. I have found that because slip y is 40% Grolleg and 60% flux, it cannot be used for either the top or the bottom of any form. As a thick application of slip y dries, its tendency is to become flaky and it will fissure down its center. Thus, I have deduced that the casting is most successful when slip x is at each pole.

However, the slip itself needs to be mixed in a certain way so that it will not become too thick or thixotropic. When I first began, I had problems with scum appearing on the surface of the cast object as it dried, which I eventually realized to be an issue with ferro frit 3134, which has a different ratio of silica to ferro frit 2134, which I now use. I also had problems with the slip setting up too quickly, while it was still in the bucket. I ended up having to use about three times the amount of deflocculant to fix the issue. Instead, I borrowed from baking techniques and divided the heavy ingredients from the light, added water, and mixed accordingly. Specifically, I mix the clays together, adding no less than half the total amount of water and half the total amount of deflocculant. I then mix the fluxes together, adding the remaining water and deflocculant. Once the two parts are fully saturated, the fluxes are gently folded into the clays, mixed on high with a blunger, and sieved.

This casting slip tends to thicken within 10 hours of being mixed; typically, casting slip becomes more fully saturated and will produce better casts after it has been allowed to sit over night. With this slip in particular, I try to mix and cast immediately to avoid adding more water and...
deflocculant. Adding additional water or too much deflocculant can cause cracking to occur while the cast is setting. Because I am casting solid, this method of casting produces satisfactory results. I must also take size into account. If the form is too large, not only will it take a long time to set up and dry, but it will also be heavy and extremely difficult to move, and is prone to cracking. For larger sculptures, I set the form to dry in an electric kiln, slowly increasing the temperature to 212 °F, for as long as possible, sometimes up to several weeks. This ensures that as much water is removed before it is bisqued. While this technique improves the odds, it does not promise perfection. Firing these large objects to high temperatures causes the surface to constrict and voids to appear.

Chance

Much of my work depends on chance. There are several variables that could alter the end result. Each sculpture is cast and fired solid. I build these forms this way so that I can create tunnels through the form with the crumpled paper and aluminum foil. These tunnels are visually very similar to caves and crevasses found on Earth. Building this way leaves the forms physically heavy. The weight connects the viewer to geology and is representative of rock and stone, instead of creating a connection to traditional ceramics, where the finished piece is typically hollow and in most cases, quite light. In this case, the weight of the casting slip pushes against the materials, either creating interesting void spaces or sometimes closing the tunnel completely.

I prefer to work scientifically, with measurements and calculations. Firing and building with this amount of variation and chance is challenging to one’s logical mind. I find myself being connected to my work, in a manner that is similar, yet not exactly the same, as the relationship
between two people. I am fortunate to be able to release control, and let nature take its course. What is left at the completion of the burning is what is meant to be. This work cannot survive unless control is released.
II) The Void

To live is to lose things; things of the everyday, items used, touched, and carried. Things reminiscent of the fact of our being. Fragments of our bodies; things which mark our place in time. This loss is an automatic process; this loss is out of our control. It is poetic and catastrophic. It is exceptional and mundane. The epicenter of this loss, our body, functions as the locus of lived experience and the singular site of our perception. As Sartre explains, it is from this vantage point that we sense our unique presence in space and time while simultaneously being aware of the corpse within.

Barbara Smith, Provenance: The Body

The Void symbolizes a space that is left behind. It is our loss. It is the infinite bind between space and time. It is neither real nor unreal, but is held somewhere between—causing a struggle of what is perceived to be certain.

If the idea of empty time is both unfamiliar and contentious, the idea of empty time is neither. We cannot look at the world without seeing the distance between objects. What are these distances but empty space? Not quite empty, someone will object, as they are filled with air. But air itself is full of empty spaces, for it is composed of molecules of nitrogen, oxygen, carbon dioxide, water, and the inert gases (among other things), and these are not packed together but are far apart and constantly moving. Most of the atmosphere, it seems, consists, literally, of nothing at all. As one of Aristotle’s predecessors, Democritus, put it, the world is nothing but atoms in the void (le Poidevin 31-32).

The formal aspect of the void is as fascinating as the conceptual aspect. Formally, I take a positive form (a sphere), turn it into a negative form (the mold), create another positive form (the sculpture), and then I create a ‘void space’ within that positive form during the firing process with combustible materials. Throughout this process, I am both adding and subtracting. The void spaces
speak to the physical world as the oxygen we breathe and the air that forms our atmosphere, as well as the dark matter that fills outer space. The form itself is the physical plane, where we live and breathe. Combustion and disintegration of material is life and death—a process that finds everyone and everything.

**Physical World: Geology & Astrophysics**

I am inspired by the natural sciences and the amount of knowledge that can be acquired from study within the field. Natural science is defined as a branch of science that is concerned with natural phenomena including matter and energy, and their interrelations and transformations with objectively measured phenomena. Specifically, I am motivated by what we have learned from geology, cosmology and astrophysics.

These forms I have chosen either occur during natural geologic processes that form planets, mineral deposits, and rocks, or in the case of the cylindrical form, during geological field studies. Spheres can be found both in space and on earth. After a gravitational collapse of a star and billions of years of violent impact accretion, planets take on the form of a sphere. On Earth, calcium carbonate and silica particles form into rounded masses called ooliths, and through the event of abrasion, many rocks eventually take the shape of a sphere. It is a perfect shape. It is a recognizable shape. And it fits in the palm of your hands. The size makes the object personalized. While on display the spheres rest on metal stands that vary in height. The objects seem to float, suspended within the Void. As you gaze into its epicenter, the continuum of the Void extends through the object, blurring the lines between inner and outer. The ideal way to observe these objects is by cupping and by experiencing them individually and up close. Holding a sphere feels as though you
are holding a planet. One’s perception of reality, size, and proportion becomes challenged. One becomes larger than the planet we live on. These objects are heavy; some are smooth, while others are rough, some have tunnels, while others have caves. No two are identical, not unlike planets and people themselves.

The cylinders sit—upright and stoic, as sentinels watching over the sea of universes scattered below. They ground the audience to reality, preventing one’s mind from fully leaving the realm of truth. They resemble the core of the earth, cut out layers of sediment and rock. These are our bodies. They are the permanence we seek of our own frames, never to change, grow old, or die.

The permanence of a material is of stark contrast to the impermanence of the expansion, and in effect, the continuation, of the known universe. This world, as we know it, will cease to exist. The molecules and atoms will continue, however, for where are they to go?
Imaginary World: Metaphysics & Ontology

The Aristotelian tradition...held that one could work out all the laws that govern the universe by pure thought: it was not necessary to check by observation.

Stephen Hawking, *A Brief History of Time*

As stated in the introduction, Heidegger explains that, “‘Being’ is the most universal and the emptiest of concepts. As such, it resists every attempt at definition.” (Heidegger 2) The question of Being is rooted in ancient ontological queries of Plato and Aristotle, who were concerned with the understanding of Being, who possesses it, and where can it be found. There are three presuppositions that require the question of Being to be asked. First, while it has been understood that Being is the most universal concept and that it transcends any class or genus, “Aristotle himself knew the unity of this transcendental ‘universal’ as a *unity of analogy* in contrast to the multiplicity of the highest generic concepts applicable to things.” (Heidegger 23) In other words, Being is found in all living things, however, there is controversy on whether or not animals possess true Being. Secondly, because Being is indefinable, it is impossible for it to be considered an “entity.” “‘Being’ cannot be derived from higher concepts by definition, nor can it be presented through lower ones.” (Heidegger 23) Traditional logic dictates that there is a way of justifying “entities,” but the in-definability of Being disallows that justification. Thirdly, because we are already aware that the question of Being should be addressed, it is understood that this concept is self-evident, where if “one cognizes anything or makes an assertion, whenever one comports oneself towards entities, even towards oneself, some use is made of ‘Being.’” (Heidegger 23) This is the reason the question of Being is relevant: the meaning of Being is still unknown.
Because much of my work is dependent on technical processes, making a connection between Being and technology is necessary. In his 1953 essay, “The Question Concerning Technology,” Heidegger explains that technology is the “vast array of instruments, machines, artefacts [sic] and devices that we human beings invent, build, and then exploit” (Wheeler 3.3). Heidegger says that technology is a tool that we control. While we understand that technology is a means to an end and is a product of human activity, we still do not understand the essence of technology. This is where the idea of a clearing comes in, as Heidegger reinterprets his earlier notion of intelligibility. “A clearing is a region of Being in which things are revealed as mattering in some specific way or another” (Wheeler 3.3). These thoughts connect to the idea of revealing, which is found moving freely within the clearing. The Greeks used the term alētheia for revealing. The Romans translated alētheia to veritas. In English, we say truth. Truth is connected to everything that we know; Being, clearing, and technology. Without Truth, we have nothing.

Closing Thoughts:

The sculptures I make exist on a conceptual plane between the real and the unreal. They are abstracted realities that depict the void spaces we carry within ourselves. I am interested in the dichotomy between investigation and imagination, and the physical world and the imaginary world and where these concepts and places converge within the spectrum of visual art. Through geology, astrophysics, metaphysics, and ontology, I explore the making process, materials, deconstruction/reconstruction, human nature, and chance
These sculptures are representative of us. They represent our thoughts, feelings, and desires. Stephen Hawking once said, “Because the partial theories that we already have are sufficient to make accurate predictions in all but the most extreme situations, the search for the ultimate theory of the universe seems difficult to justify on practical grounds…Today we still yearn to know why we are here and where we came from. Humanity’s deepest desire for knowledge is justification enough for our continuing quest. And our goal is nothing less than a complete disruption of the universe we live in.”
Works Cited


**Clay and Glaze recipes:**

**Slip y—Cone 6**
- Grolleg: 40%
- Flint: 20%
- Kona F-4 Feldspar: 19%
- Nepheline Syenite: 19%
- Whiting: 2%
- H2O: 40%
- Sodium Silicate: .4%

**Fake Ash Variation—Cone 6**
- Synthetic Bone Ash: 5%
- Dolomite: 18%
- Lithium: 2%
- Strontium: 9%
- Frit 3134: 10%
- OM-4 Ball Clay: 24%
- Cedar Hills: 23%
- Silica: 10%
- Rutile: 15%

**Slip x—Cone 6**
- Tile 6: 25%
- Tennessee No.1: 13%
- EPK: 12%
- Nepheline Syenite: 28%
- Frit 3124: 12%
- Flint: 10%
- H2O: 40%
- Sodium Silicate: .4%

**Clear Glaze with Copper—Cone 6**
- Talc: 7%
- Whiting: 10%
- Frit 3249: 20%
- Nepheline Syenite: 30%
- EPK: 13%
- Silica: 20%
- Copper Shavings: 15%
PRESENCE | ABSENCE
SARA HENRY
EXHIBITION DATES: MAY 15-19, 2015
OPENING RECEPTION:
FRIDAY MAY 15, 2015 7:30PM - 9:30PM
GALLERY HOURS:
FRIDAY - TUESDAY, 11AM TO 5PM
Samuel Dorsky Museum of Art
State University of New York at New Paltz
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