이뭣고
Imwotgo – What Is This?

By David Malcolm FISHER

A thesis exhibition presented to OCAD University in partial fulfillment of the requirements for the degree of Master of Fine Arts in Interdisciplinary Art, Media, and Design. Ada Slaight Gallery, OCAD University, 100 McCaul Street, March 2-5, 2022.
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1. ABSTRACT

My research is interdisciplinary; I come to it from a medical background in Reconstructive Plastic Surgery. My methodology is further informed by mindfulness practice and my enquiry into the philosophy of consciousness. My research methods provide creative opportunities to allow me to come to an inflection point between a figure and its abstraction.

While I maintain an advocate of the Scientific Method, I have recently become more spiritual in my thinking. I question the value of Dualism, specifically Cartesian Dualism (and its effect on the future of the planet and of interpersonal relationships). I am becoming more in favour of an outlook more in line with Non-Duality.

The central concept of this project is the use of abstraction and figuration as a metaphor for mind and matter. I use this metaphor to evoke consideration of non-duality.

Various 3D data acquisition strategies – photogrammetry, 3D scanning, and 3D modelling are used. The sculptural forms generated are then further altered within 3D interface environments. In contrast to my practice as a *Reconstructive* Plastic Surgeon, in my creative research, my sculptural works are driven by a *Deconstructive* process. This process involves the digital reduction of 3D data of the human figure through sequential subtractions. This approach aims at finding the *Inflection Point(s)* between a human figure (or its anatomical subunits) and its (their) abstraction(s) inside a computerized environment. I create 3D forms that may be perceived as figurative or abstract, influenced by one's line of sight. The artwork achieves a non-dualistic state; neither figurative nor abstract, but both. In this way, it can be considered a metaphor for non-duality. Other processes involve the digital superimposition of forms through which I challenge the concept of individuality and separateness hinged on the notion of a bounded self and a clear demarcation between subject and object. Other digital modelling strategies are also explored to further investigate the boundaries and spectra between figurative forms and their abstractions. These forms are then 3D printed. Some of these are then cast in bronze.

This series of sculptures were exhibited in the Ada Slaight Gallery, OCADU, 100 McCaul Street in March from the 2nd to the 5th, 2022.

KEYWORDS: Sculpture, 3D Digital Process, Figuration, Abstraction, Inflection, Deconstruction, Non-Duality

2. ACKNOWLEDGEMENTS

2.1. LAND ACKNOWLEDGEMENT

I acknowledge my privilege. I acknowledge my good fortune to live, work, and create on the ancestral and traditional territories of the Mississaugas of the Credit, the Haudenosaunee, the Anishinaabe and the Huron-Wendat, who are the original owners and custodians of the land on which we stand.

2.2. PERSONAL ACKNOWLEDGMENTS

I would like to thank my Primary Advisor, Dr. Claire Brunet, for the tremendous support that she has given me throughout this entire process. Dr. Brunet has been available, supportive, sharing, and a caring guide. I cannot imagine what my exhibition and thesis would have been like without her input. My Secondary Advisor, Dr. Haru Ji, was a more recent addition to my team, and provided some additional critical inputs to my creative process, the exhibit, and thesis.

I would like to acknowledge all my teachers and classmates at OCADU who have in their own ways supported me in this journey.

I want to acknowledge the support of and accommodations made by my colleagues in the Division of Plastic Surgery at the Hospital for Sick Children, Toronto.

A heartfelt thanks to Leila and my entire family for their unwavering support.

3. TABLE OF CONTENTS

3.1 CONTENTS OF THE THESIS

This thesis paper will outline the contextual and theoretical background, research objectives, research methods and methodologies that have inspired and led to this series of sculptures. The thesis paper structure follows IAMD Thesis Proposal Guidelines presented by The Office of Graduate Studies at OCADU.

The artworks are free-standing sculptures; 3D prints (PLA) and bronze casts.

The sculptures were exhibited in the Ada Slaight Gallery, OCADU, 100 McCaul Street March 2-5.

3.2 RESEARCH QUESTIONS

My research questions investigate the inflection point and spectra between figuration and abstraction. The following questions will be addressed:

1) What are the potential boundaries, spectra, and interactions between figurative and abstract forms?
2) How can an artwork become a metaphor for the non-duality of mind and matter?
3) Can superimposition of forms challenge the concept of individuality and separateness?
4) How can 3D Digital Processes facilitate exploration towards a sculptural *Inflection Point*?

3.3 OBJECTIVES

Key Objectives:

1) To research theories of dualism and non-dualism, and to use these two competing theories to inform my art practice.

2) To reduce the figure through sequential subtractions to find the Inflection Point between the figurative and the abstract such that the resultant sculpture achieves the non-dualistic state of being simultaneously both.

3) To explore the boundaries and spectra between a figure and its abstraction, by taking advantage of the creative freedom inside digital spatial interface environments.

4) To produce a series of bronze sculptures based on the above listed objectives and creative outputs (3D printed works).

5) To exhibit my sculptures in a gallery setting.

My first objective is based on my interests in metaphysics and psychology. Over the past few years, I have made meditation part of my regular schedule. This has led me to question Rene Descartes theory of Dualism; that the mind and body are distinct and separable.

According to Gary Hatfield, Descartes presented the following argument to establish that mind and body are distinct substances:

> Next, I examined attentively what I was. I saw that while I could pretend that I had no body and that there was no world and no place for me to be in, I could not for all that pretend that I did not exist. I saw on the contrary that from the mere fact that I thought of doubting the truth of other things, it followed quite evidently and certainly that I existed; whereas if I had merely ceased thinking, even if everything else I had ever imagined had been true, I should have had no reason to believe that I existed. From this I knew I was a substance whose whole essence or nature is simply to think, and which does not require any place, or depend on any material thing, in order to exist. This argument moves from the fact that he can doubt the existence of the material world, but cannot doubt the existence of himself as a thinking thing, to the conclusion that his thoughts belong to a nonspatial substance that is distinct from matter. (Descartes 32-3)

In the following paragraph Hatfield explains why the argument is fallacious.

> It relies on conceivability based in ignorance. Descartes has not included anything in the argument to ward off the possibility that he, as a thinking thing, is in fact a complex material system. He has merely relied on the fact that he can doubt the

> existence of matter to conclude that matter is distinct from mind. This argument is clearly inconclusive. (Hatfield)

I am now leaning towards a more spiritual way of thinking (or being) that is more aligned with 'non-duality'.

> "You are one with all that is" (Tolle 15).

This has led me to further explore the philosophy of consciousness. My readings of authors David Chalmers, Christian De Quincy, Annaka Harris and Robin Wall Kimmerer are the greatest influences on my current understanding of the theories of consciousness that inform my creative research.

Defining consciousness is not as simple as it may seem. In his essay *"What is it like to be a bat?"* philosopher Thomas Nagel defines consciousness as follows: "An organism is conscious if there is something that it is like to be that organism" (436). Consciousness is experience from a first-person point of view. Nagel argues that while a human might be able to imagine what it is like to be a bat by taking "the bat's point of view", it would still be impossible "to know what it is like for a bat to be a bat." David Chalmers describes the hard problem of consciousness; why should physical processes have an experience at all? Ockham's Razor (the simplest explanation is usually the right one) would support the theory of Panpsychism – the possibility that all matter is imbued with consciousness in some sense. There seems to be some shared ground here within meditation practice, non-duality and Panpsychism. It is this common ground that I am using to influence my sculpture practice.

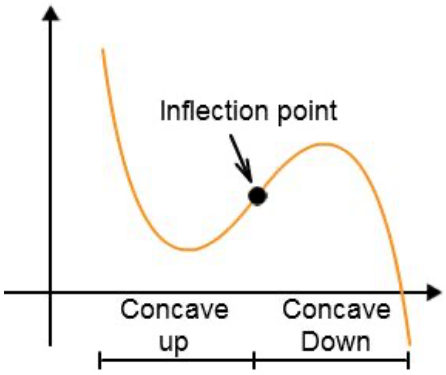
As a Reconstructive Plastic Surgeon, it has been my practice to reconstitute that which is missing or damaged, to create symmetry of form and to restore function. The end goal is often quite simple to conceive (for example the creation of an ear when one is missing, Figure 1) though the process of surgery may be quite challenging.

Figure 1 – Ear Reconstruction for Congenital Microtia

In contrast, in my artistic practice, the 'end goal' is not so well defined at the outset. Rather, it is determined over time and through a creative process that is open to error

and leaves space for the unexpected. The processes are equally challenging, use similar visual-spatial skills, and require the acquisition of new knowledge.

My second objective is to reduce the figure through sequential subtractions within computer spatial environments to create 3D printed works. These are neither figurative nor abstract, but two sides of the same coin, depending on one's perspective. In such a state, the artwork becomes a metaphor for non-duality.



ABSTRACT / FIGURATIVE

Figure 2 – Inflection Point on a complex curve (neither concave nor convex, but both)

My third objective is to explore the boundaries, and spectra between a figure and its abstraction, taking advantage of the creative freedom within digital spatial interface environments. My process initially involves the creation of human figurative forms within a 3D digital environment. My research method includes 3D scanning and or 3D modelling. Data was uploaded from websites, captured by photogrammetry, or constructed inside ZBrush® or Rhino® software interfaces to generate the figures. The figures are reduced using sequential Boolean Difference (subtraction) within Rhino® to create asymmetrical forms. The material and negative spaces then compete equally for the gaze and attention of the viewer.

In my experimentation with the subtraction of material and the creation of negative spaces, the human figure approaches the abstract. The resulting sculpture is meant to create doubt and engagement. I experiment with how the visible material form and the invisible negative spaces contribute equally to what Magritte may be referring to when he states: "thought which unites 'things.'"

> There is no reason to grant the invisible more importance than the visible, nor the converse. What does not 'lack' importance is the mystery evoked *in fact* by the visible and the invisible, and which can be evoked *potentially* by the thought which unites 'things' in the order which invokes mystery. – Rene Magritte, Letter to Michel Foucault, June 4, 1966 (Foucault and Howard 20)

I also explore non-dualism utilizing 3D superimposition, the supernatural condition where two physical entities occupy the same space (Figure 3). Superimposition of the forms creates abstract sculptures that challenge the concept of individuality and separateness that are based on ideas of a bounded self.

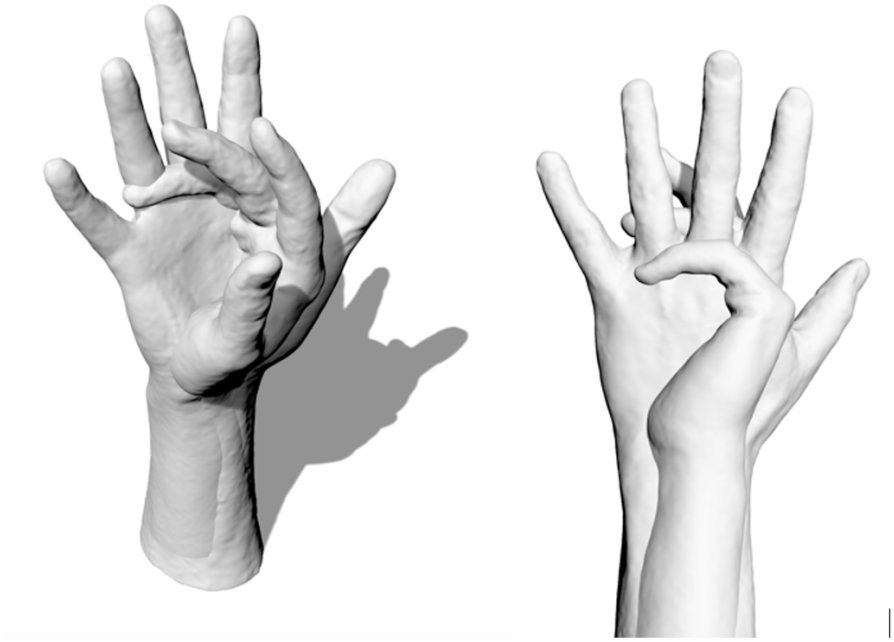


Figure 3 - 2 Superimposed Hands (2020) – Screenshot Rhino®

My fourth objective is to cast some of these sculptures in bronze.

My final objective will be to exhibit my sculptures in a gallery. The exhibition was held March 2nd to the 5th, 2022, in the Ada Slaight Gallery, 100 McCaul Street, OCADU.

3.4 THEORETICAL / CRITICAL BACKGROUND AND FRAMEWORK

This section of the Thesis Proposal might seem somewhat disjointed in its flow, not unlike a conversation where tangential thought is at play. Each subsection introduces terminologies and concepts that underlie the theoretical framework of my project. Each subsection can be read independently, and one does not necessarily lead to the next.

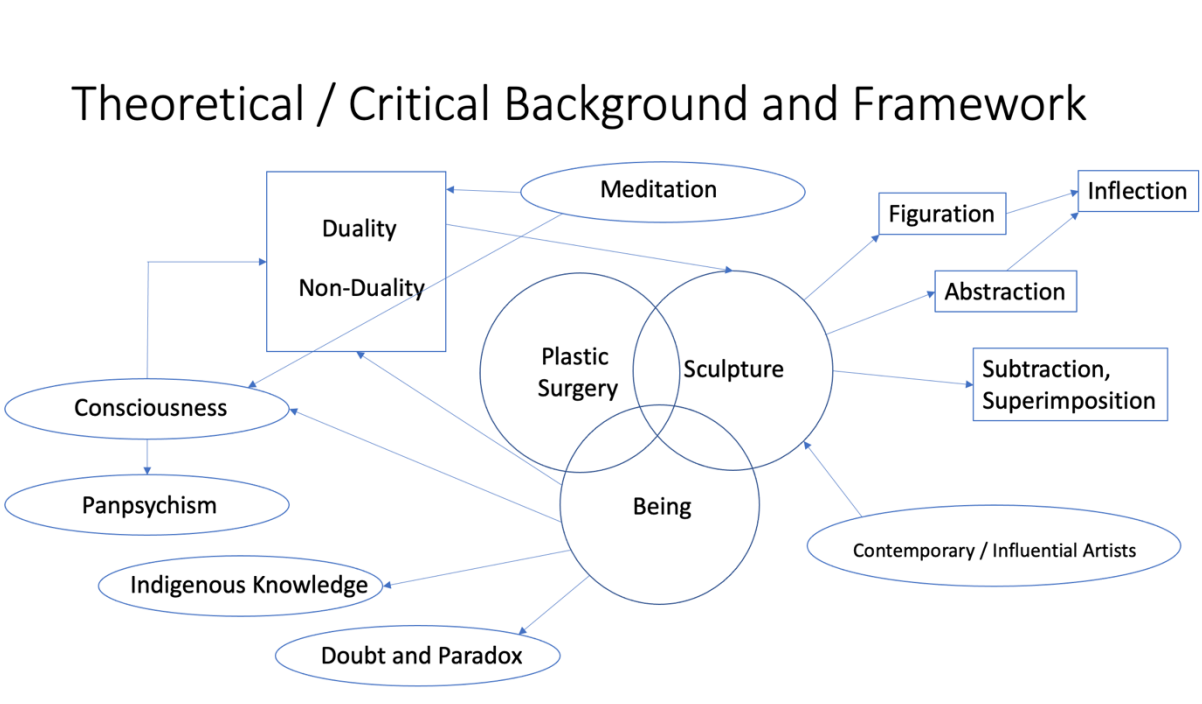


Figure 4: Mind map – Theoretical / Critical Background and Framework

The above "Mind map" (Figure 4) depicts, in diagrammatic terms, the concepts that will be introduced in this section. The concepts do not flow linearly, nor does the text.

3.4.1 ARTISTIC STATEMENT

One of the sculptures chosen for my IAMD Gallery Exhibition is entitled *What If? What If Not? [Alternate title: About the Artist]* (2019) (Figure 5). It was created for GGRA-6003-001-Critical Theory course as an autobiographical mapping. It is comprised of stacked 3D-printed cylinders. Each cylinder represents a place and time. They are stacked in sequence from earliest at the bottom to most recent at the top. Coloured white, black or grey, changes in colour represent a change in location. Each cylinder marks a city where I have lived. Although uniform in diameter, each cylinder varies in height to reflect the time spent in each city - one inch of height is the equivalent of one year. Some intersections are interrupted, a pivotal event necessitating a new cylinder to represent time in the same location but under different circumstances. Each of these hollow cylinders contains memories. Because the cylinders are not fixed to one another, it will be slightly different each time the tower is reassembled. Memories, after all, are open to reinterpretation.

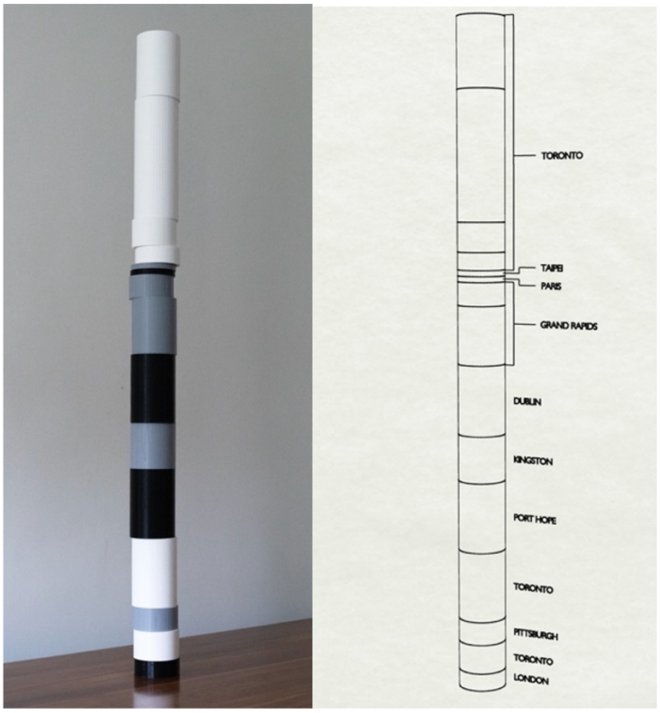


Figure 5 - *If – What If? What If Not?* [Alternate title: *About the Artist*] (2019) - 3D printed PLA (~4” x ~4” x 58”)

I have always considered myself an artistic person, not always in the sense of creating art but in seeing it. I have been educated in a scientific environment to understand and practice surgery. Now I am exploring the subjective – that which science cannot yet explain.

I want my sculptures to interact with nature and architecture. I enjoy the exercise of comparing all possible viewpoints of a sculpture. I want to look through the negative spaces and see beyond the work. I consider this process critical, as it is how a solid immovable object, rooted in concrete, displays its gestures. In this process, images are processed, thoughts are provoked, and memory is formed.

I wish to produce large-scale sculptures using a combination of modalities: photogrammetry, 3D modelling, foundry/mould making, wood and metal fabrication. Ultimately, I want to recreate some of my ideas on a larger scale (Figure 6).

Figure 6: *Male Torso Abstraction No. 4 / 2,* Bronze (6” x 10” x 18.5”) (with a miniature mannequin for proposal of scale)

3.4.2 PLASTIC SURGERY

I am a Professor in the Department of Surgery in the Division of Plastic and Reconstructive Surgery at the University of Toronto. I am the Medical Director of the Cleft Lip and Palate Program at the Hospital for Sick Children in Toronto. As a Plastic Surgeon I rely on three-dimensional visual analysis, problem solving, planning, manual dexterity, and an utmost respect for the medium. The goals are restoration of form (normal, symmetry) and function.

In *De Curtorum Chirurgia per Insitionem* ("On the Surgery of Mutilation by Grafting" (1597), Gaspare Tagliacozzi (1545-99), Pioneer of Plastic Surgery wrote:

> "We restore, rebuild, and make whole those parts which nature hath given, but which fortune has taken away. Not so much that it may delight the eye, but that it might buoy up the spirit, and help the mind of the afflicted." (Menard 5)

The medium is the body, and as such is precious. Errors are costly. In my sculpture, I rely on this experience to create similar marriages of form and function but with the new freedoms and restrictions imposed by the specific scale and material chosen for each project.

In my sculptural art practice, I take great refuge in the variety of available media, in the serendipity of error, in deconstruction, in erasure, and the creation of abstract forms. In contrast to well-planned and well-executed surgery, this creativity includes the unexpected.

3.4.3 FIGURATION AND ABSTRACTION

"Figurative has been used to refer to any form of modern art that retains strong references to the real world" (Tate) This contrasts with abstract art, which "uses visual language of shape, form, colour and line to create a composition which may exist with a degree of independence from visual references in the world" (Nrshinga). As immediately recognizable and engaging as figurative art may be, abstract art "offers artists the widest possible variety of expression … in ways altogether unavailable in figuration" (Young 279). But is it possible for art to be both figurative and abstract? Such chimerism has been explored before, more so in painting (for example Gerhard Richter and Francis Bacon); less so in sculpture.

Figure 7*: V-n-s* (2018) – Plaster Bandage (14" x 12" x 51")

This sculpture (Figure 7) was made from medical plaster, a medium I am very familiar with. I subsequently had it cast in bronze. The sculpture was made during the

last term of my BFA program at York University and was featured in my portfolio in my application for my MFA. I have included it in my IAMD thesis because it represents my first exploration in the process of working towards abstraction, starting from the figure. While there are some engaging abstractions within the negative spaces, I now feel I did not reach the inflection point as this was not my goal at the time. Its creation preceded my current methodology when I had yet to come up with the concept of an inflection point.

3.4.4 ONTOLOGY

Ontology is a branch of philosophy that investigates the nature of reality, of being. There are four main competing theories in Ontology:

1) Scientific materialism (everything is matter)
2) Idealism (everything is mind)
3) Dualism (mind and matter are separate)
4) Panpsychism (mind and matter are inseparable)

The latter two, dualism and panpsychism, agree that both mind and matter are real. Rene Descartes believed that the mind and body are distinct and separable (dualism). However, he was not (nor has anyone since been) able to explain how they interact. Ockham's razor (the simplest explanation to complex problems is most likely correct) would support panpsychism: all matter is imbued with sentience.

3.4.5 BEING

Art can allow humans to express to others what it is like to *be* human in this world that we inhabit. But what *is* being? I am both interested and perplexed by ontology (the branch of metaphysics that studies the nature of being, of reality).

> "It is said that "being" is the most universal and the emptiest concept. As such, it resists every attempt at definition" (Heidegger 1).

I am also trying to educate myself on the history and effects of North American Colonization. By introducing meditation and mindfulness into my life in the past few years, I have begun to question Rene Descartes's theory of Dualism. I am now leaning towards a more spiritual way of thinking (or being) aligned with 'non-duality.' Non-duality is a translation of the Sanskrit word 'advaita,' meaning 'not two'. It denotes the essential oneness (unity, completeness, wholeness) of life that exists here and now. "Despite the compelling appearance of separation and diversity, there is only one reality or universal essence. Oneness is all there is – and we are included within it." (Foster) This has led me to explore the philosophy of consciousness further.

Annika Harris writes:

> "Consciousness is an intrinsic property of matter; indeed, it's the only intrinsic property of matter that we know, for we know it directly, by ourselves being material conscious things (89)."

The "hard problem" (David Chalmers 3) of consciousness is how (and even more so why) felt experience can arise out of non-sentient matter. Some neuroscientists have suggested the possibility that all matter is imbued with consciousness in some sense. This view is referred to as *Panpsychism*. Could this explain how abstract art seems to have a life of its own and how it speaks to us?

3.4.6 CARTESIAN DUALISM

Dualism is the belief that something is composed of two fundamentally different components (Figure 8). In contrast, in Zen Buddhism, Nondualism is the absence of subject-object duality.

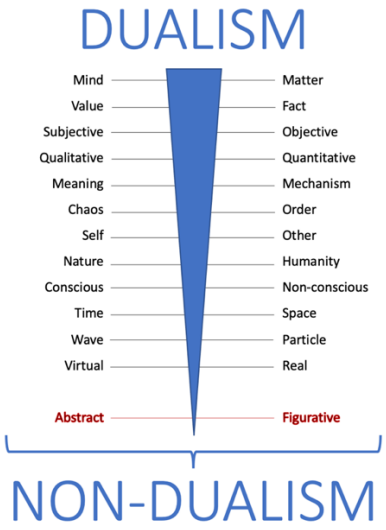


Figure 8 - Binary conditions

Cartesian Dualism deals with the dual existence of man. Descartes believed that man consisted of *Matter* and *Mind.* He believed in a *mechanistic* view of the material world — that matter follows its own laws, except when interfered with by the mind. Man's mind simply "pulls the levers" of our bodies. For Descartes, the brain and the mind are not the same things. The brain serves as a connection between the mind and the body. Descartes believed that man was the only dualistic creature. He positioned animals in the realm of the purely physical, mechanistic world, acting purely on instinct and the laws of nature. Descartes' influence on western thinking has had a dramatic and lasting effect. Western science is limited to the objective and the empiric.

> A major – perhaps *the* major – element in the conceptual and perceptual matrix that shapes our worldview is our scientific attitude toward consciousness and its relationship to the world of matter. For from this view, we look out on a world devoid of any real intrinsic value, of any inherent purpose, meaning, or feeling. Science has exorcized the ghost from the machine and left us with a desacralized and dispirited world. (De Quincy 4)

De Quincy continues to argue that:

> "Its [the world's] only value was its potential for exploitation by science and technology to serve the functions of industry, commerce, and government…The underlying pathology, therefore, is metaphysical: a split between matter and mind" (5).

Descartes' ideas that mind and matter are separate, that the mind can control matter, and that humans are the sole inhabitants of mind are unhealthy for the planet. The planet should not be considered a matter to be manipulated as we see fit. Neither is this healthy for our minds.

In *The Power of Now,* in a chapter entitled *You Are Not Your Mind,* author and contemporary spiritual teacher Eckhart Tolle writes:

> The philosopher Descartes believed that he had found the most fundamental truth when he made his famous statement: *cogito ergo sum* "I think. Therefore I am." He had, in fact given expression to the most basic error: to equate thinking with Being and identity with thinking. The compulsive thinker, … lives in a state of apparent separateness, in an insanely complex world of continuous problems and conflict…
>
> Identification with your mind creates an opaque screen of concepts, labels, images, words, judgements, and definitions that blocks all true relationship. It is this screen of thought that creates the illusion of separateness, the illusion that there is you *and* a totally separate "other." (Tolle 15)

Figure 9: *Non Cogito Ergo Sum (I Don't Think. Therefore I am*) (2020) - 3D printed PLA - 9" x 5" x 15"

I question this concept of identifying the self with thought in my sculpture *Non Cogito Ergo Sum (I Don't Think. Therefore I am)* (Figure 9). I am, not when I think, but rather when I am one with everything around me; I am when I sense, not when I think.

> "Unlike thinking, direct sensation, which mindfulness encourages, is a direct portal to the present moment, whereas thought generally takes us to an imaginary past or future." (Bodian)

Of course, we need to learn from the past and plan for the future, but the past is composed of incomplete and often erroneous memories, and the future may never be. Regret and shame of past actions, fear and hope for future events, constantly compete for our attention, and take us away from the now – the only true reality. When we identify with our thoughts alone, we become a pawn to our biases, instincts, patterns, and assumptions.

> *"Oiesis*, self-deception or arrogant unchallenged opinion, requires that we hold all our opinions up to hard scrutiny; even our own eyes deceive us." (Holiday 77)

For our eyes do indeed deceive us. Take the optic blind spot, for example (as demonstrated by Figure 10). There is a blind spot in the visual field of each eye, and the mind fills in the gaps through some best-guess algorithm.

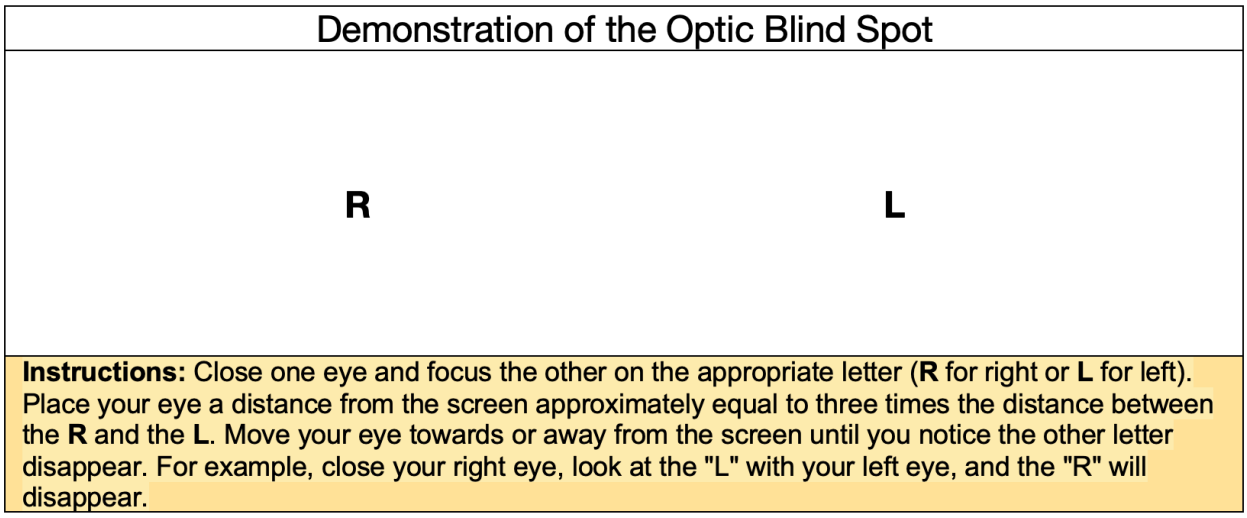


Figure 10: Demonstration of the Optic Blind Spot "Blind spot (vision)"

3.4.7 GESTALT THEORY

Following my Colloquium presentation, it was suggested by one of my classmates that my methodology recalled Gestalt Theory. I had not heard of this theory but was interested to investigate it briefly. While this theory did not primarily inform my practice, I did find some features of the theory (Multistability and Reification) that could be applied to my work and that the reader might find interesting.

Max Wertheimer, Kurt Koffka, and Wolfgang Kohler founded Gestalt psychology in the early 20th century. The dominant view in psychology at the time was Structuralism[1]. They opposed the view that the aim of psychology should be to break consciousness down into basic elements. They argued that the psychological “whole" is prioritized and that the "parts" are defined by the structure of the whole (“Gestalt psychology”).

> “The whole is something else than the sum of its parts, because summing is a meaningless procedure, whereas the whole-part relationship is meaningful.” (Koffka 176)

The key principles of gestalt systems are:

1. *Emergence*
2. *Reification*
3. *Multistability*
4. *Invariance*.

[1] Structuralism, rooted in British Empiricism, was based on three interrelated theories: *Atomism, Sensationalism, and Associationism.* Together, these establish the view that the mind constructs all perceptions and thoughts from lower-level sensations that are associated closely in space and time.

Multistability (or *Multistable perception*) is the tendency of ambiguous perceptual experiences to pop back and forth between two or more alternative interpretations. An example is Danish psychologist Edgar Rubin's Vase (Figure 11).

Figure 11: Danish psychologist Edgar Rubin's Vase (circa 1915) – in the public domain

Rubin's Vase must have subconsciously influenced my sculpture *Hand and Dorsal Abstraction* (2020) (Figure 12). I created a virtual sculpture of my hand (acquired by photogrammetry) and created an abstract vase-like sculpture by revolving the border of a cutting plane positioned along the dorsum of the hand in line with the index finger. With this pairing of a hand and its abstraction, I have created a sculpture that is both figurative and abstract. In contrast to Rubin's vase, it is the negative space between the two that is the most engaging part of the piece. For me it is the essence of another Zen koan – "Everything is nothing. Nothing is everything."

Figure 12: *Hand and Dorsal Abstraction* (2020) - 3D printed ABS (6" x 6" x 18" + 6" x 8" x 18")

Engagement with many of my works relies on the tendency for each piece to offer *Multistable Perception*, as described above.

Reification refers to the human mind's tendency to consider an object in its entirety before it perceives the object as the sum of individual parts. Idesawa' Spiky Sphere (Figure 13) is an example. A complete three-dimensional shape is seen where, in actuality, no such thing is drawn.

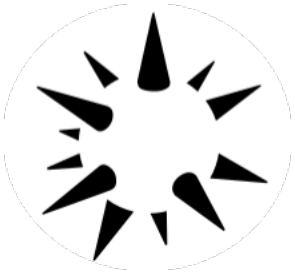


Figure 13: *Idesawa's Spiky Sphere*[2]

In my remodelling of the figure in my own work, Reification is made more challenging through the process of subtraction. I take away parts that would otherwise help the viewer construct a perception of the original form. In this way, alternative perceptions are accepted, and the figure becomes an abstraction.

[2] from Lehar S. (2003) The World In Your Head, Lawrence Erlbaum, Mahwah, NJ. p. 52, Fig. 3.3

3.4.8 INDIGENOUS KNOWLEDGE

Having chosen a career in surgery, I had to first learn the medical sciences: Biology, Chemistry, Physics, Physiology, Anatomy, Pharmacology, etc. And while there is much art in medicine and surgery, the artistry is not tested in medical school examinations. The science is taught, while the art is there to learn on your own.

Robin Wall Kimmerer, an Indigenous Native American and Professor of Botany, writes in her book *Braiding Sweetgrass*, that science is a language of objects, that terminology is used to define the boundaries of what is known, and that what lies beyond our grasp remains unnamed. She states that "science has cornered the market on truth" (160) and that it is based on a "profound error in grammar, an omission, a grave loss in translation from the native languages of these shores" (49).

Wall Kimmerer writes:

> Gardens are simultaneously a material and a spiritual undertaking. That's hard for scientists, so fully brainwashed by Cartesian dualism, to grasp… English doesn't give us many tools for incorporating respect for animacy. In English you are either a human or a thing. (Wall Kimmerer 123)

She quotes Thomas Berry:

> "We must say of the universe that it is a communion of subjects, not a collection of objects… Wouldn't things be different if nothing was an *it?"* (55-57)

On the subject of Time, Wall Kimmerer writes:

> Time as objective reality has never made much sense to me. It's what happens that matters. If there is meaning in the past and in the imagined future, it is captured in the moment. When you have all the time in the world, you can spend it, not on going somewhere, but on being where you are. (296)

I include Wall Kimmerer's thoughts on time because it is hard for me to think about being without thinking of time. I likely appreciated both concepts before I learned to speak, but still remain somewhat perplexed by each.

Heraclitus of Ephesus, an Ancient Greek, pre-Socratic, Ionian philosopher and a native of the city of Ephesus (then part of the Persian Empire), is credited with the saying "*this river I step in is not the river I stand in*". If you have ever passed over Toronto's Queen Street viaduct, you may have read these words, on the public artwork (1996) by artist Eldon Garnet, atop the bridge.

> Perhaps we cannot know the river.
>
> Maybe there are no such thing as rain; there are only raindrops, each with its own story.

> Listening to rain, time disappears. If time is measured by the period between events, alder drip time is different from maple drip. This forest is textured with different kinds of time, as the surface of the pool is dimpled with different kinds of rain. Fir needles fall with the high-frequency hiss of rain, branches fall with the *bloink* of big drops, and trees fall with a rare but thunderous thud. Rare, unless you measure time like a river. And we think of it as simply time, as if it were one thing, as if we understood it. Maybe there is no such thing as time, there are only moments, each with its own story… Paying attention acknowledges that we have something to learn from intelligences other than our own. Listening, standing witness, creates an openness to the world in which the boundaries between us can dissolve in a raindrop. (Wall Kimmerer 299-300)

We can take this thinking and apply it to all matter. Maybe there is no such thing as inanimate objects. Perhaps we are indeed just a collection of particles, each with its own story. Maybe there are no boundaries. Maybe there is only oneness.

I find this idea of a oneness that we are all a part of compelling. I think that identification with the self may be an *a priori* condition of identity politics that today seems so divisive.

3.4.9 DOUBT AND PARADOX

Descartes could doubt the existence of the physical world, but he argued that his mind existed because doubting was a thought process. He thus arrived at his famous conclusion "*Cogito ergo sum* — I think, therefore I am." He argued that man was a dualistic creature composed of both mind and matter, two distinct entities.

A paradox[3] is a statement or proposition that seems self-contradictory, contrary to commonly accepted opinion, but expresses a possible truth in reality. A paradox, De Quincy suggests, "invites us into the ambiguity of being – an ambiguity of neither this-or-that nor this-and-that, neither either/or nor both/and, but all of these together" (8).

A sculpture that is simultaneously figurative and abstract is such a paradox. The sculpture *Oracle* (Figure 14) is an example, appearing like an ear from one view but open to numerous alternative interpretations from other perspectives.

Figure 14: *Oracle (2022),* as viewed in Rhino®, subsequently cast in bronze *(v.i.)*

[3] *Paradox* = "beyond" *(para)* + "opinion" or "belief" *(doxa)*

3.4.10 PRACTICE

My research questions (stated in Section 3.2) inform my sculptural practice by using *Figurative* and *Abstract* as metaphors for *Matter* and *Mind*. I am exploring the transition from the figurative to the abstract. This boundary and this spectrum between the two inform my creative works and are the way I challenge dualism. I aim to create a body of work in the perceptual spatial boundaries between abstract and figurative forms of expression.

I use a variety of 3D modelling strategies to achieve this. Data acquisition includes photogrammetry and 3D modelling within platforms such as ZBrush® and Rhino®. Within these platforms, there is no weight, no gravity, and no physical boundaries. Scale is an arbitrary choice. As such, the possibilities seem limitless.

I have documented the steps in this research in various forms: written descriptions, computer screenshots, videos of rendered sculptures, 3D printed maquettes and bronze sculptures.

Two main strategies were utilized to create my IAMD Thesis Exhibition pieces: 1) Subtraction and 2) Superimposition.

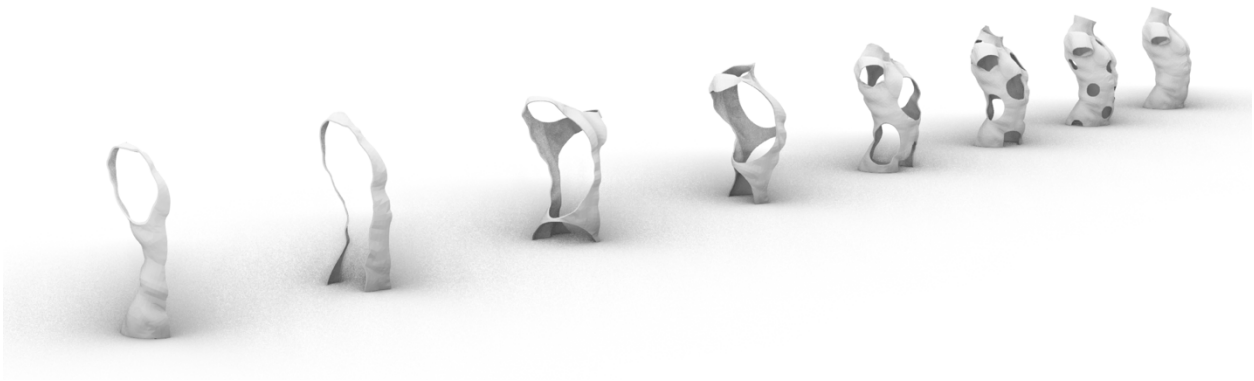


Figure 15: *Male Torso Abstractions* as viewed in Rhino®

In the above example (Figure 15), I used 3D modelling software (Rhino®, Meshmixer®, and ZBrush®) for sculpting, transforming, and creating 3D sculptures suitable for 3D printing. Using a variety of 3D interface environments, the digital data were transformed, through increasing levels of Boolean subtractions, into a series of sculptural propositions. I linearly arranged the pieces to demonstrate the spectrum from Figuration (far right) to Abstraction (far left).

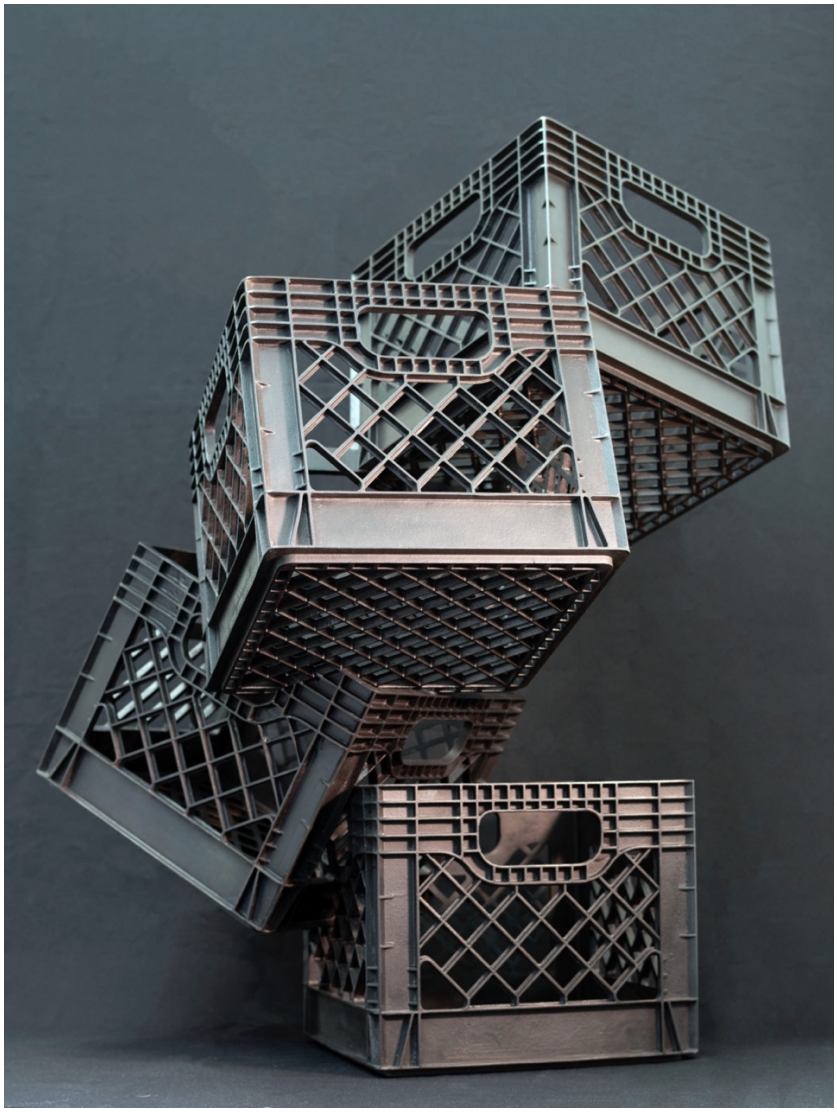


Figure 16: *4 Black Crates* (2020), bronze - (29" x 30" x 39" / 60 lbs)

I use 3D superimposition, the supernatural condition where two physical entities occupy the same space, to challenge the concept of individuality and separateness that hinges on the notion of a bounded self. We tend to experience the self as a being bordered by our skin, but we are a collection of borrowed molecules, and there is more space between our subatomic particles than there is matter. Trillions of neutrinos pass right through us every second without leaving a trace.

Superimposition provides another means of deconstruction; the two intersecting parts of superimposed objects become one (1 + 1 = 1). Above (Figure 16), digitally created milk crates (Digital Readymades) are superimposed. In this transformation, utilitarian objects lose their function to become abstract sculptures.

3.4.11 CONTEMPORARY / INFLUENTIAL ARTISTS

Historically, I have been influenced by the architect Frank Gehry and sculptors such as Rodin, Giacometti, Moore, Andy Goldsworthy, and Anish Kapoor.

Dan Collins and Xavier Veilhan are two contemporary sculptors with whom I share similar processes; the transition from figuration towards abstraction through digital environments to create physical sculptures.

1) Dan Collins

> "I situate my work in the gap between the body and technology." (Collins)

Figure 17 - *Twister* – Dan Collins (1995)

This 3D digital self-portrait was begun in 1995 using a whole-body laser scanner at Cyberware in Monterey, CA. The image has undergone a series of transformations and been translated into various materials using traditional and digital fabrication methods. (Collins)

2) Xavier Veilhan

Figure 18 - *Michael* (2007) Xavier Veilhan

Many of Veilhan's figurative works start with the human form. By subtraction of detail and reducing the surface polygon count, more abstract forms are created that still retain some essence of the original.

3) Serge Hamad

Contemporary Artist Serge Hamad is a French/Algerian self-taught artist based in New York.

> "In his *Temporal Perception* series, he turns an expressive realistic image into abstraction, shifts colours and blurs reality between photography and digital rendering. When seen for the first time at a glimpse, the artworks seem to form an entity" ("Serge Hamad").

Figure 19: *Temporal Perceptions #5,* Serge Hamad

> "It's just when our brain starts to analyze our vision that we understand how we lost our childhood." (Hamad)

Hamad uses a similar shift from figuration (in this case photographic representation) towards abstraction in 2-dimensional imagery. His quote brings to mind the concept of "beginner's mind." Having a beginner's mind means you approach the world through a beginner's eyes. The term is translated from the word, Shoshin, from Zen Buddhism. It means you look at every situation you're placed in as if it's the first time you are seeing

it. It means possessing an attitude of eagerness, openness, and a lack of preconceptions when studying a subject.

> "In the beginner's mind there are many possibilities. In the expert's mind there are few." (Suzuki 21)

3.5 RESEARCH METHODOLOGY

By creating simultaneously abstract and figurative sculptures, I want to engage the viewer into the possibilities of non-duality and break down the artificial barrier between the abstract and figurative and between mind and matter. The following works have been selected as examples of my creative outcomes of various courses undertaken during my IAMD MFA programme. They are accompanied by statements created at the time for in-class critiques.

3.5.1 IAMD-6020-002 Directed Interdisciplinary Studio 2 - “Expansion Pack”

I engage with everyday objects (sometimes mundane, often iconic, occasionally both) to create something visually engaging. In *Four Black Crates,* I chose milk crates because it is an iconic form but also part of my life. They held my record collection as a teenager and supported my mattress and makeshift desk in university. They store and transport everything from my house to the cottage and my art and art supplies.

These crates are *Digital Readymades* that have been reverse engineered using *Rhino*® software and an actual crate as a guide. They were then 3D printed and subsequently cast in bronze. The crates were manipulated and blended to create sculptures that any other methodology could not have made.

My process begins by viewing 3-dimensional objects from all points of view. By rotating my crates with my mouse in Rhinceros®, I found myself in a meditative state. Usually, this state is achieved by limiting perceived awareness of the sensorium at the expense of all attention to complex thought and emotion. This allows me to approach “first mind” prior to thought and emotion. I shared this concept in a short video (Figure 20) with audio of Tibetan singing bowls.

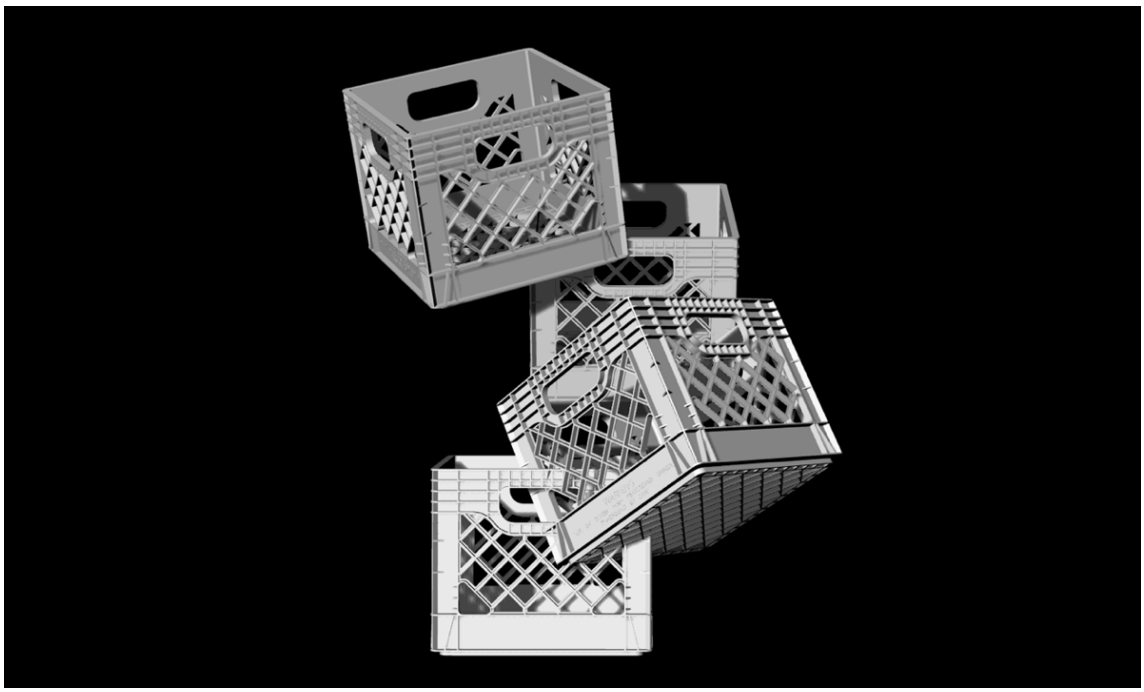


Figure 20 - Still from film. *Crate Meditation*

3.5.2 DIGF-6011-BioArticulation

For this project, I concentrated on the question of the self in relation to the material universe.

Neuroscientist Anil Seth uses “controlled hallucination” to describe how we experience ourselves in the world. The brain is a “predictive engine,” and “what we perceive is its best guess of what’s out there in the world” (Harris 56). “Being on the earth doesn’t separate us from the rest of the universe; indeed, we are and have always been in outer space” (Harris 4).

My senses orient me in this space. My insensate brain is a Gumball or Gizmo at the origin (0,0,0) of this Cartesian grid in the universe (Figure 21). Each of us centers ourselves individually in the centre of this shared universe. The matter we embody takes up some of this space and cannot be shared. “Our sense of individuality and separateness hinges on a bounded self and a clear demarcation between subject and object. But all that may be a mental construction, a kind of illusion” (Pollan p. 305).

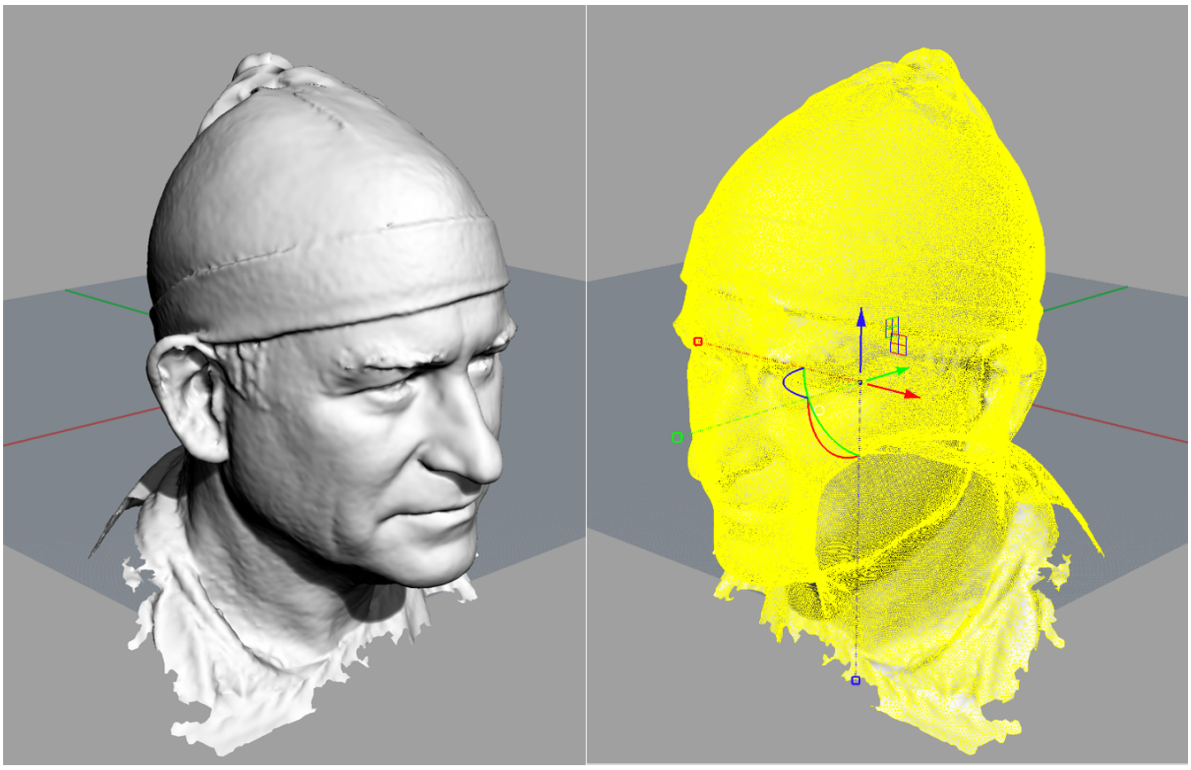


Figure 21 – *Self Portrait* (3DMD® to Rhino®)

My senses, to varying degrees, can provide me with data at a distance from this origin point. Unless I have a psychedelic out-of-body experience, I am confined to this. My somatic sensory system limits me to sensations within the limits of my skin envelope and within my reach. My binaural hearing abilities allow me to interpret sounds from all

directions, while light can only be appreciated within my visual field. Each of these sensations is positioned within a set of Cartesian coordinates, be they a light touch on the tip of a finger, the sound of a car horn blocks away, or the light from a distant star light-years away. My only reality is my conscious perception of these stimuli, appreciated by my material being; a material being that occupies a certain space within the universe.

This project involved an experiment in 3D superimposition to explore the boundary between the figurative and the abstract. In this age of *physical distancing,* I created a condition that allowed two physical entities to interact within the same space.

Inspired by French sculptor Auguste Rodin's sculptural studies of hands, I decided to superimpose hands. I obtained virtual images of my right hand in various positions using photogrammetry (3DMD®). I cleaned up the images in Meshmixer® and ZBrush®, then superimposed them in Rhino®. Finally, the sculpture was 3D printed using Ultimaker Cura® and an Ultimaker® printer to create a simultaneously figurative and abstract form (Figure 22).

Figure 22 - *2 Superimposed Hands* – Rhino® screenshot (2020)

3.5.3 DIGF-6009-Information Visualization - "Capturing the Inner Self"

My "inner self" seems inseparable from what I do. My own hands are critical in allowing me to do what I do, both surgery and sculpture. This realization made me question who I might be or what I might do if my hands could not do what I wanted. Through virtual rigging, I was able to deform my hands. Using scans of my dominant right hand and forearm dressed in surgical gown and gloves (Figure 23), I produced well-described functional deformities resulting from flexor and extensor tendon imbalances.

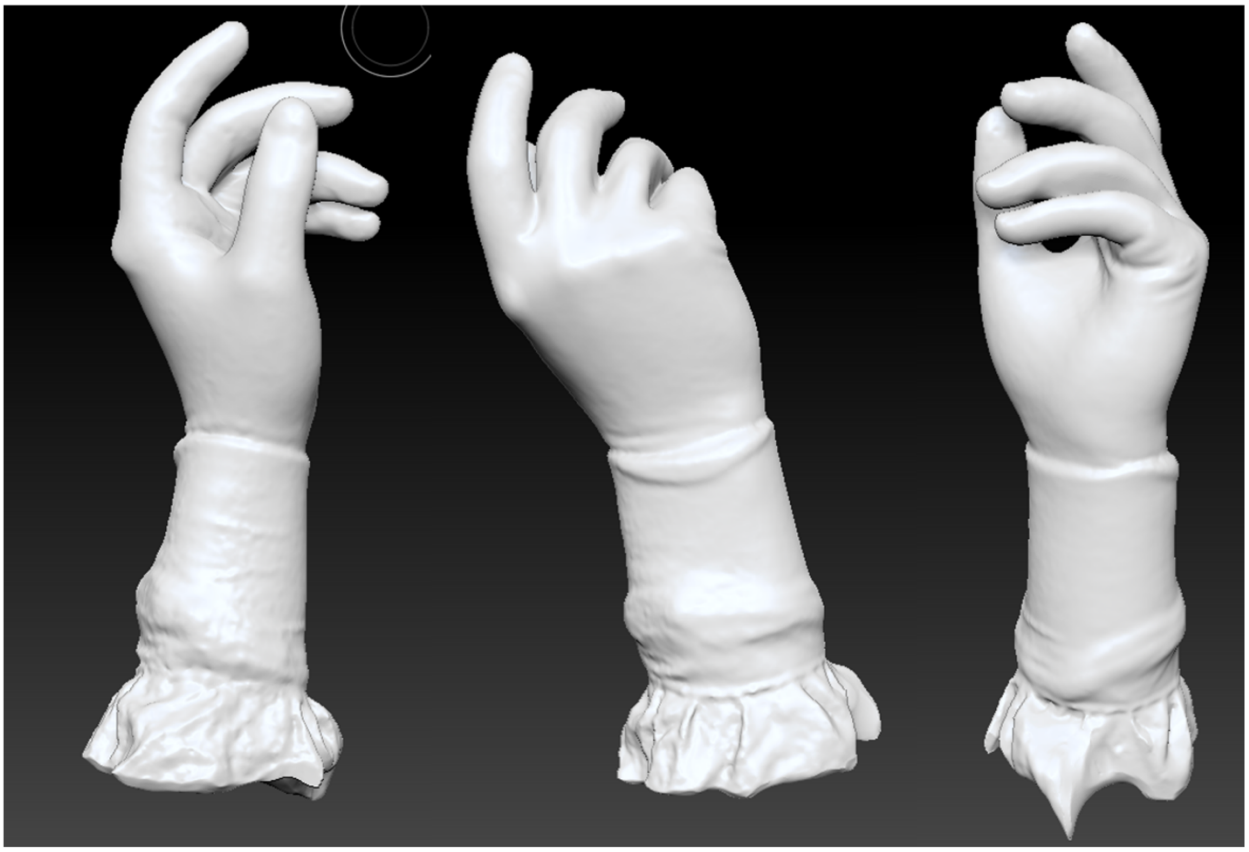


Figure 23 – *Right hand and forearm in surgical gown and glove* – ZBrush® screenshot (2020)

Using the same scan, I built a rigging system (Figure 24).

I then used this rigging to manipulate my hand to create de-functioning deformities; 1) z-deformity of the thumb (Figure 25), 2) boutonniere deformity of the index finger, and swan-neck deformity of the middle finger (Figure 26).

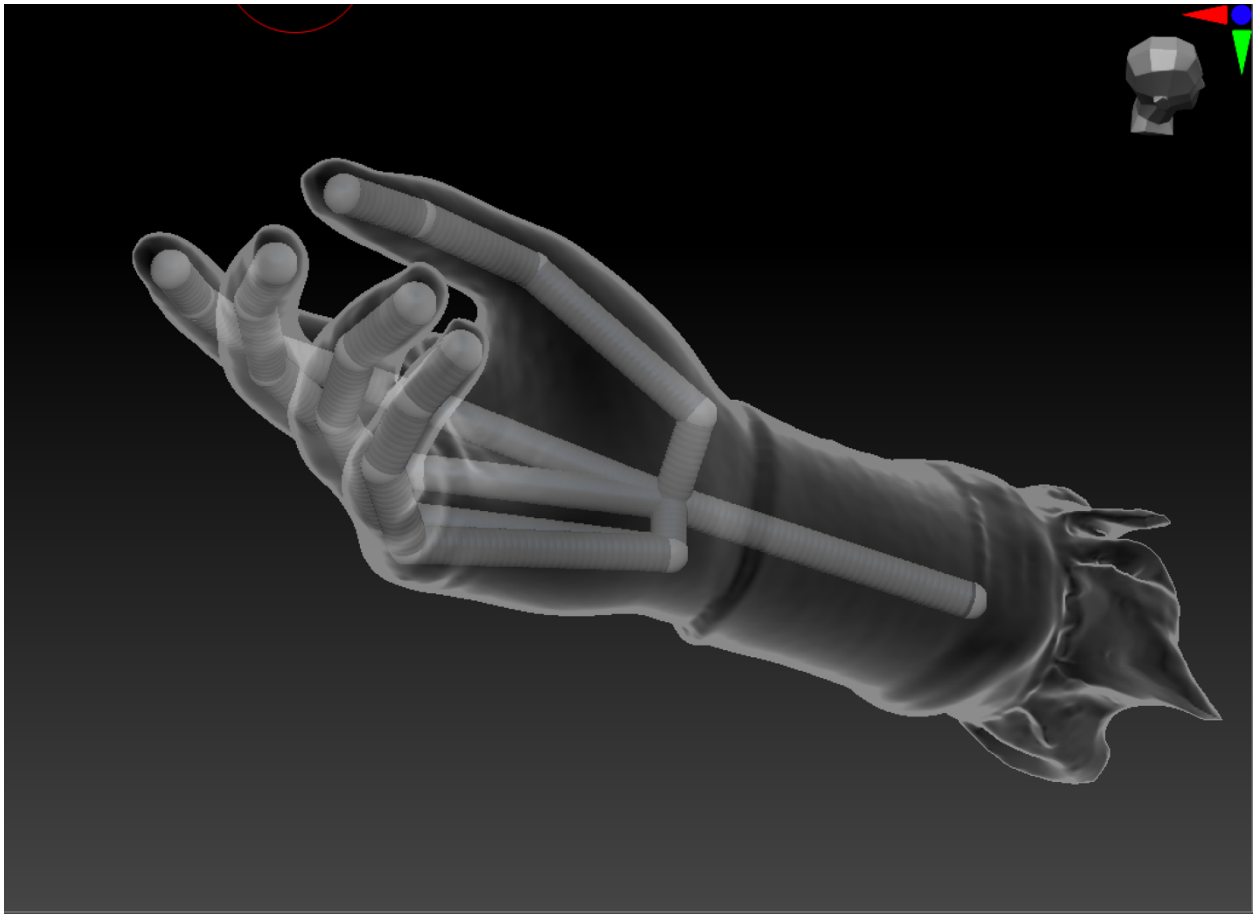


Figure 24 – Rigged Hand – ZBrush® screenshot (2020)

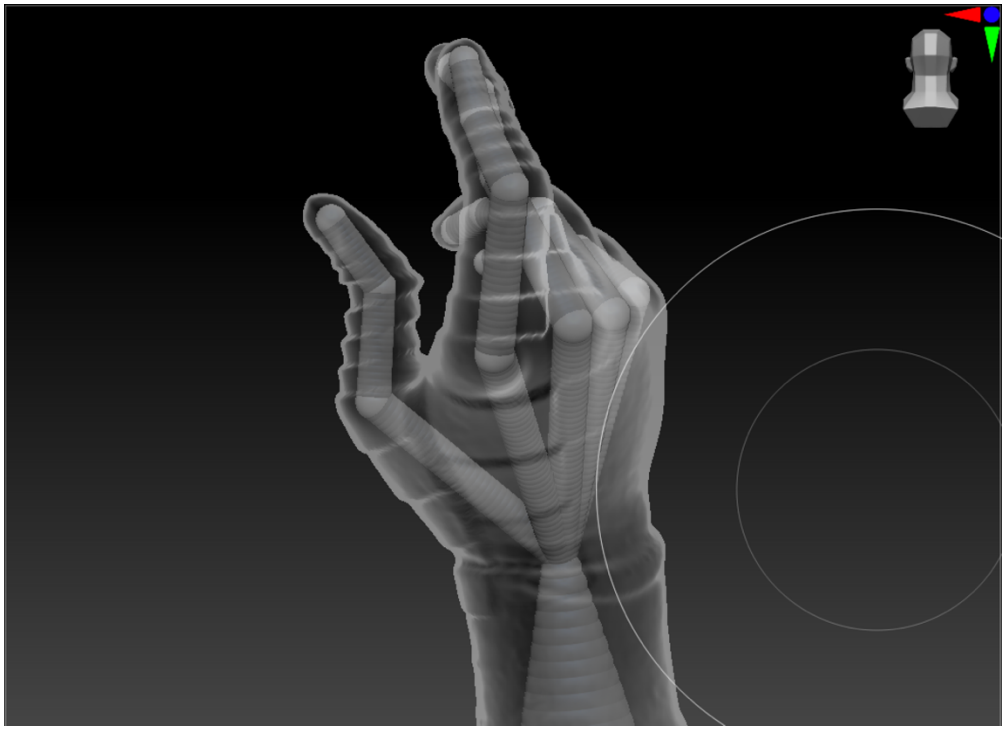


Figure 25 – Z-deformity of thumb – ZBrush® screenshot (2020)

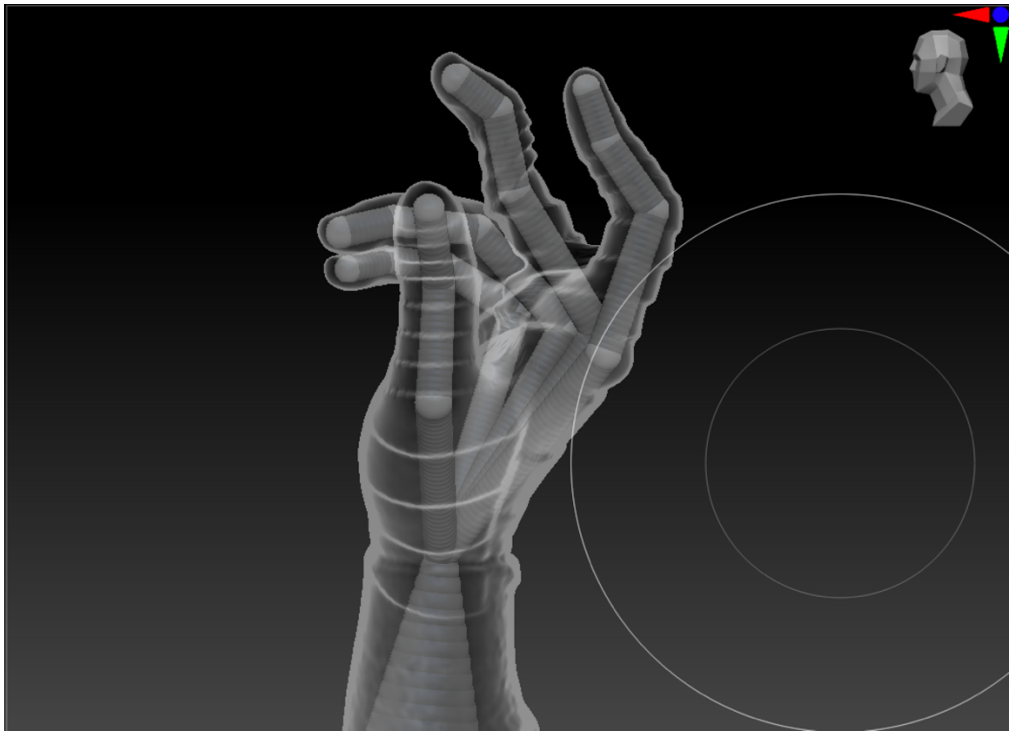


Figure 26 - Boutonniere deformity of the index finger, and swan-neck deformity of the middle finger – Zbrush® screenshot (2020)

Figure 27 – Gloved hand after moving rigging – Zbrush® screenshot (2020)

Figure 28 – Gloved hand after some repair – Zbrush® screenshot (2020)

Figure 29 - Gloved hand after some repair – Zbrush® screenshot (2020) - additional views

Figure 30 - Gloved hand after some repair – Zbrush® screenshot (2020) - additional views

3.5.4 IAMD-6898-Independent Study

This independent study focussed firstly on the creation of figurative sculptures and subsequently on the creation of abstract art forms using the initial figurative forms as a base template. The 2D works by the French/Algerian artist Serge Hamad served as a particularly influential inspiration for my 3D explorations.

Experimentation started with the creation of several figurative sculptures utilizing 3D modelling strategies. I then altered these figurative sculptures sequentially and incrementally towards the abstract. Numerous figures (chess pieces, male and female bodies), unions, subtractions, divisions, and transformations (shear, twist, bend, taper, stretch, flow) were explored. In the end, I used a 3D model of a hand using photogrammetry and abstracted it in Rhino®. Curves were made at the intersection between the hand figure and cutting planes. These curves were then “revolved” to produce abstract urn- or vase-like forms (Figures 31-33).

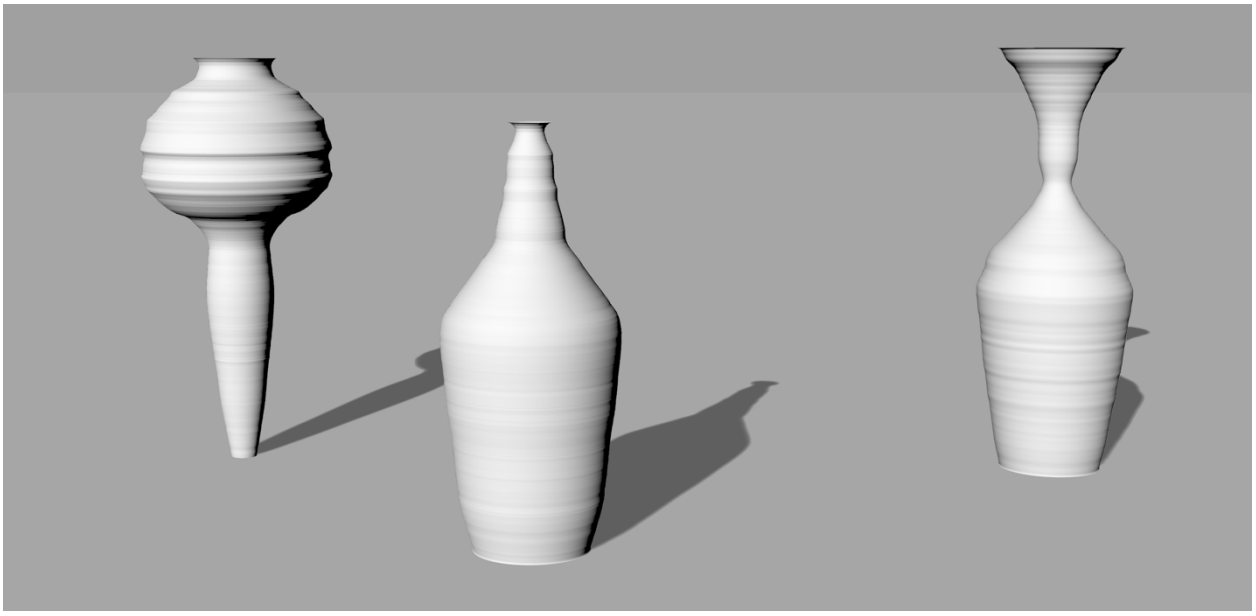


Figure 31 – Abstract Forms (Rhino® screenshot)

The abstract and figurative pieces can stand alone, but together, they demonstrate a state of transition from figuration to abstraction.

Figure 32 – *Relaxed hand and abstraction* (Rhino® screenshot)

Through this project, I also became educated in photogrammetry, Meshmixer®, ZBrush®, and Rhino®.

This independent study was particularly relevant for my practice. Before this this course, my artistic explorations lacked focus. These investigations represent the starting point for further research into the relationships between figuration, abstraction, space, perception, perspective, and consciousness that I continued to explore during my IAMD programme.

Figure 33 – *Relaxed hand and three abstractions* (Rhino® screenshot)

3.5.5 IAMD-6011-001-Directed Interdisciplinary Studio 1 - Abstraction from Figuration / “Nothing” from Something

In this course, I continued to explore the transition from the figurative to the abstract. I aimed to create a series of individual sculptures to study the perceptual boundaries between these two forms of expression.

In Project #1, Entitled “Find a Theory… Try it on”, I was directed by the theory of *Panpsychism*, suggesting the possibility that all matter is imbued with consciousness somehow. “Consciousness is an intrinsic property of matter; indeed, it’s the only intrinsic property of matter that we know, for we know it directly, by ourselves being material conscious things” (Harris 89). The “hard problem” (coined by David Chalmers) of consciousness is how (and even more so why) felt experience can arise out of non-sentient matter. I used *Conscious* and *Not Conscious* as a metaphor for *Figurative* and *Not Figurative (Abstract)* to inform these creative works. I expanded my research into the boundary between the figurative and the abstract by investigating the spectrum linking the two.

I used 3D modelling software (Rhino®, Meshmixer®, and ZBrush®) to sculpt, transform, and create forms suitable for 3D printing. Using a variety of 3D interface environments, the digital data were transformed, through increasing levels of Boolean subtractions, into a series of sculptural proposition. I linearly arranged the pieces to illustrate the spectrum. (Figure 34)

One suggestion offered during critique was to consider alternate means of presentation/arrangement of these sculptures. I then explored alternate arrangements for the pieces, as shown below (Figure 35), and I found this configuration far more engaging.

I found one of the pieces in the middle of the spectrum to be the most interesting. It was this piece, in particular, that I felt best represented the inflection point in the series. I wanted to make it larger. My printer can print prints up to 215 x 215 x 300 cm (or 8.5” x 8.5” x 11.8”). To make increase the scale, I divided the original digital print into seven parts allowing for a sculpture measuring 10” x 13” x 19”. (Figures 36,37)

Serendipitously, the parts and their incomplete articulation (Figures 38-43) proved also engaging, perhaps even more so. The parts and the incomplete sculpture are more abstract and seem further removed from the original torso from which they are derived.

My investigation then transitioned from sculpture to photography. I found that even the most abstract forms had something to say.

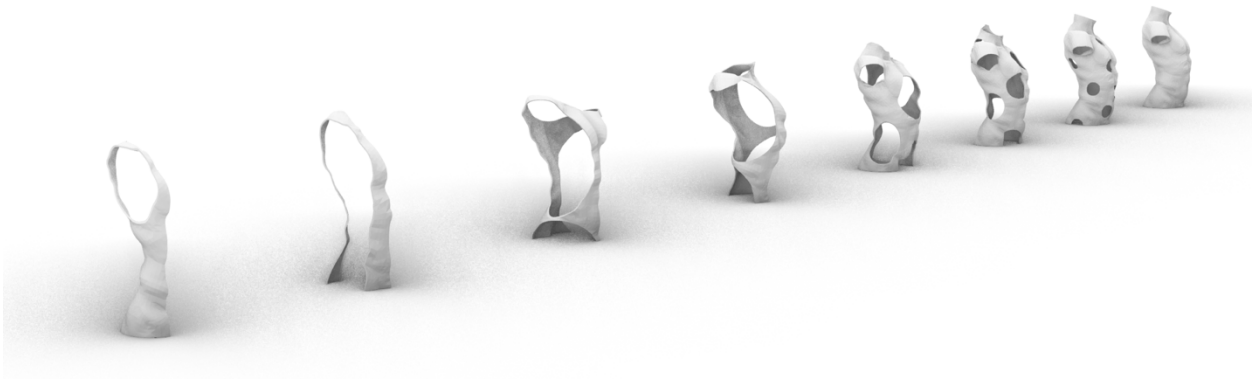


Figure 34: IAMD-6011 Project 1: “Find a theory … Try it on” – PANPSYCHISM
Male Torso and 7 Abstractions (Rhino® screenshot)

Figure 35: *Male Torso and 7 Abstractions* - 3D printed PLA (Height = ~ 8” each)

Figure 36: *Male Torso Abstraction No. 4* (2020) - 3D printed PLA (10” x 13” x 19”)

Figure 37: *Male Torso Abstraction No. 4* (2020) - 3D printed PLA (10” x 13” x 19”)

Figure 38: *Male Torso Abstraction No. 4* (2020) – parts 1 and 2 of 7 pieces - 3D printed PLA

Figure 39: *Male Torso Abstraction No. 4* (2020) – parts 3 and 4 of 7 pieces - 3D printed PLA

Figure 40: *Male Torso Abstraction No. 4* (2020) – parts 3 and 4 of 7 pieces - 3D printed PLA

Figure 41: *Male Torso Abstraction No. 4* – part 5 of 7 (2020) - 3D printed PLA

Figure 42: *Male Torso Abstraction No. 4 / 2* (2020) - 3D printed PLA

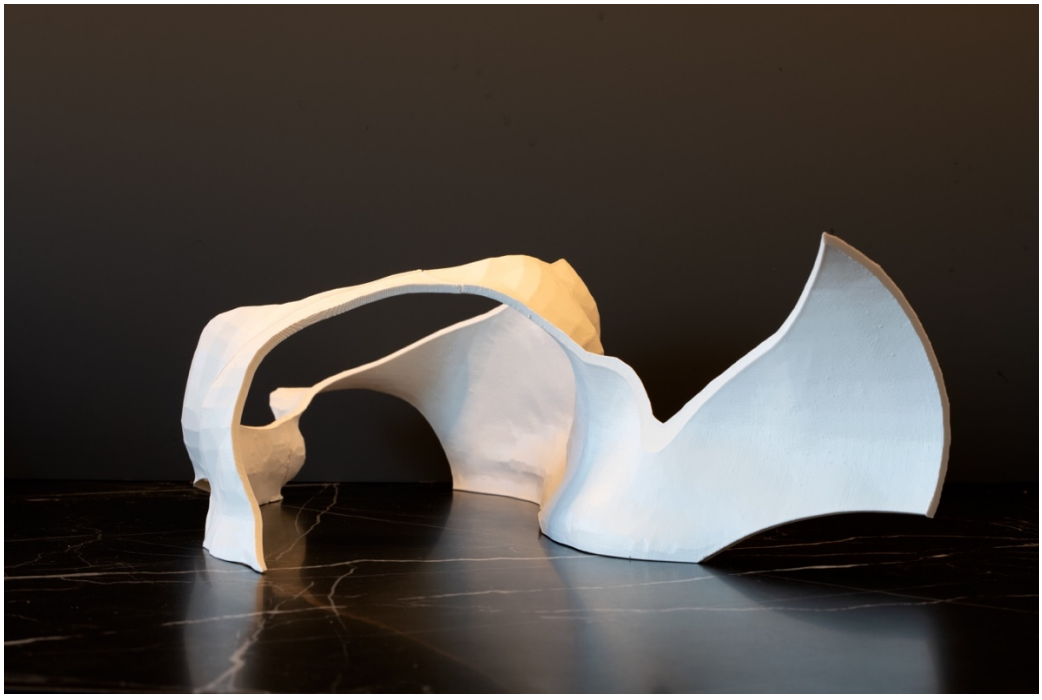


Figure 43: *Male Torso Abstraction No. 4 / 2* (2020) - 3D printed PLA

3.5.6 IAMD-6018 - MFA/MDes Individual Studio I

For IAMD-6018 - *Individual Studio I*, I created a sculpture of an ear within ZBrush®. Subsequently, I used a variety of 3D modelling strategies (ZBrush®, Rhino®, MeshLab®, Meshmixer® and Cura®) to deconstruct the figure and create a printable sculpture.

I chose an ear because Ear Reconstruction (Figure 44) is one area of focus in my clinical practice as a Plastic Surgeon.

Figure 44 – Ear Reconstruction for Microtia

In the same way, an inflection point can be found on a complex curve (Figure 45),

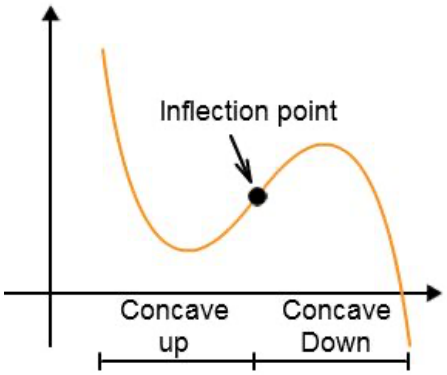


Figure 45 - Inflection point on a complex curve

Inflection curves can be identified on complex surfaces (Figure 46). These curves separate a complex surface into concave and convex parts.

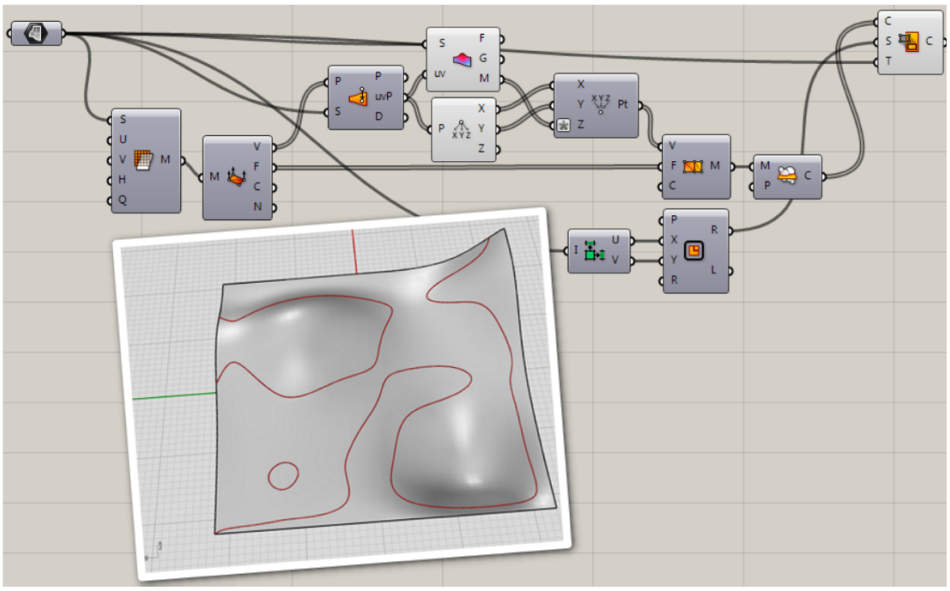


Figure 46 – Inflection curves identified on a complex surface Rhino Grasshopper®

The human eye is a receptor of light. Light can be emitted, absorbed, reflected, diffracted, dispersed, scattered, interfered, focussed and polarized. From a solid sculpture, the eye detects reflected light. Because they are more likely to reflect incident light to the eye of the observer, convexities are privileged over concavities. Light and shadows define shapes, but the human eye sees only light. Thus, the human brain favours convexities – cheekbones, shoulders, biceps, etc. The chiaroscuro of Rembrandt lighting is perhaps the best example of this concept. Parallax, relation, and perspective all play a role in altering the perception of any object by the viewer.

This sculptural exploration involved the creation of an ear that was then reduced to an abstraction by excising the convex surfaces, leaving only the concave surfaces.

I first created an ear sculpture in ZBrush® (Figure 47),

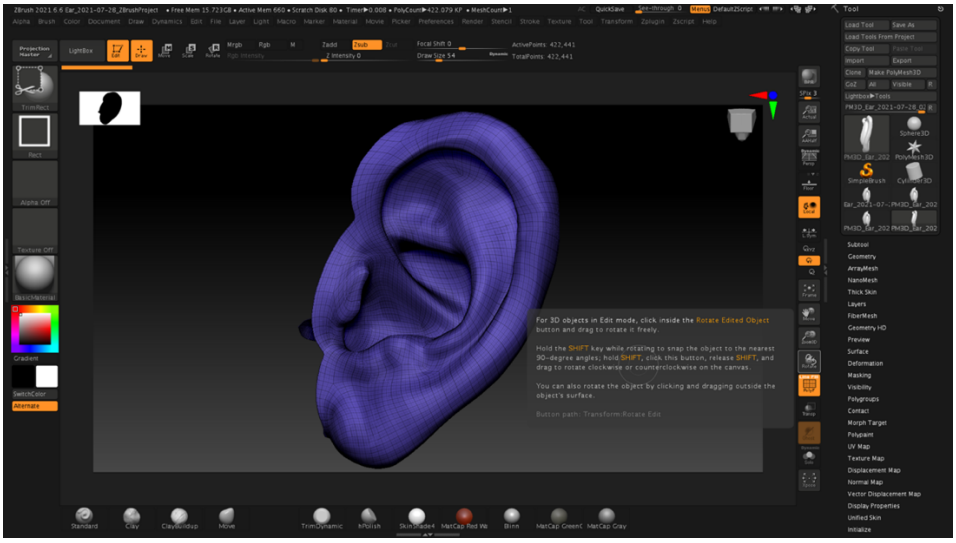


Figure 47 – Creation of an ear model in ZBrush®

I then used MeshLab® to identify convex and concave surfaces (Figure 48).

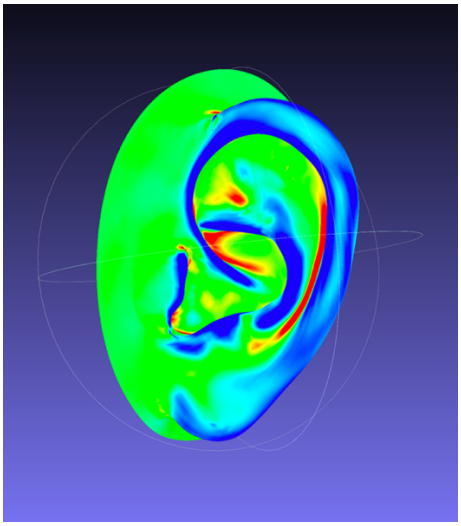


Figure 48 – The convex surfaces (blue) are demonstrated in MeshLab® using Filters > Colour Creation and Processing > Discrete Curvatures

Within ZBrush®, the convex surfaces were removed. Rhino® and Meshmixer® were then used to transform the resulting surface into a printable 3D model (Figure 49-51).

Figure 49 – Ear Abstraction (posterior view) (Rhino® Screenshot)

Figure 50 – Ear Abstraction (anteromedial view) (Rhino® Screenshot)

Figure 51 – Ear Abstraction (lateral view) (Rhino® Screenshot)

3.6 RESOURCES AND FACILITIES

The majority of the initial production of my work occurs in 3D digital environments (e.g. ZBrush®, Rhino®, MeshMixer®). Some projects started as physical objects that were captured by photogrammetry. Most of the sculptures were 3D printed in PLA using the artist's own printer (Ultimaker 3 Extended). As the overall build volume of this printer is 11" tall x 8.5" wide x 8.5" deep, I divided the pieces into parts to make larger forms. These could then be individually printed and re-assembled. An outside foundry cast larger works.

As of September 2021, I had access to OCADU fabrication shops and was able to audit FABR-2001 (Introductory Foundry) and FABR-2003 (Introductory Mouldmaking).

My Primary Advisor, Dr. Claire Brunet and my Secondary Advisor, Dr. Haru Ji, provided additional and much-needed support throughout the creative processes.

The following photographs (Figures 52-60) demonstrate my fabrication process for *Male Torso Abstraction No. 4 / 2.*

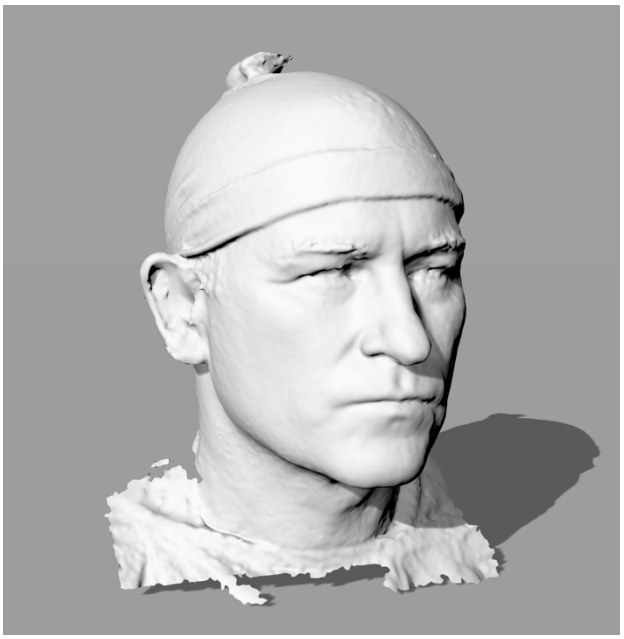


Figure 52: The Idea – Self Portrait (3DMD® > ZBrush® > Rhino®)

Figure 53: Male Torso (in Rhino®)

Figure 54: Abstraction of Male Torso (in Rhino®)

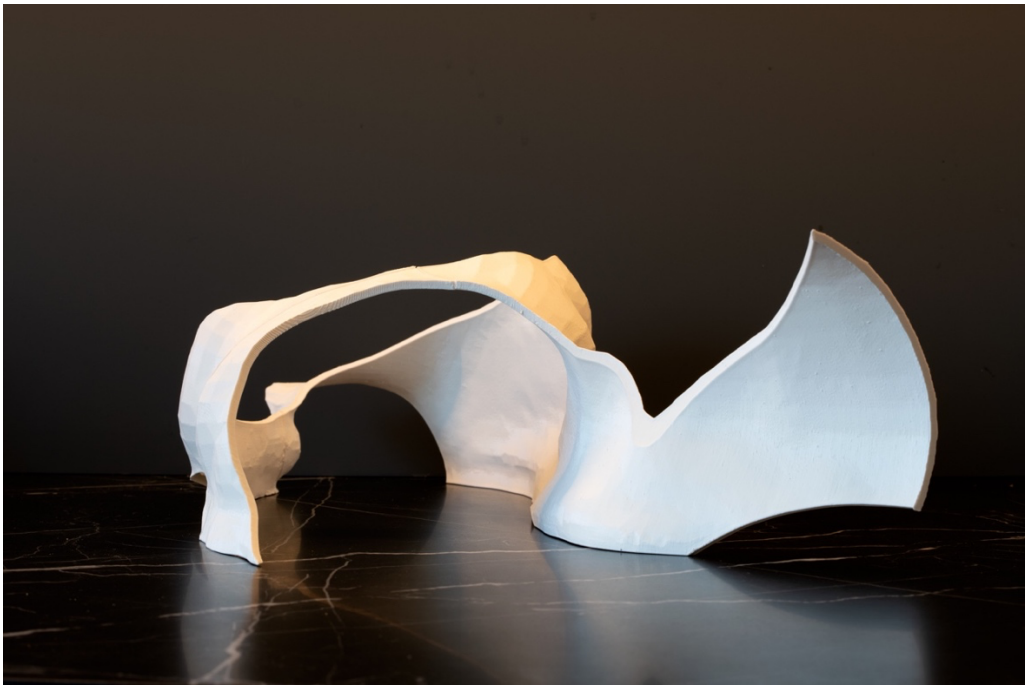


Figure 55: 3D Print (PLA) (Ultimaker 3 Extended®) – note the visible polygon segmentation

Figure 56: Gating System - OCADU Foundry – note the smoothing of the surface, blending the visible polygon segmentation with sculptors wax.

Figure 57: Ceramic Shell - OCADU Foundry

Figure 58: Foundry Pour - OCADU Foundry

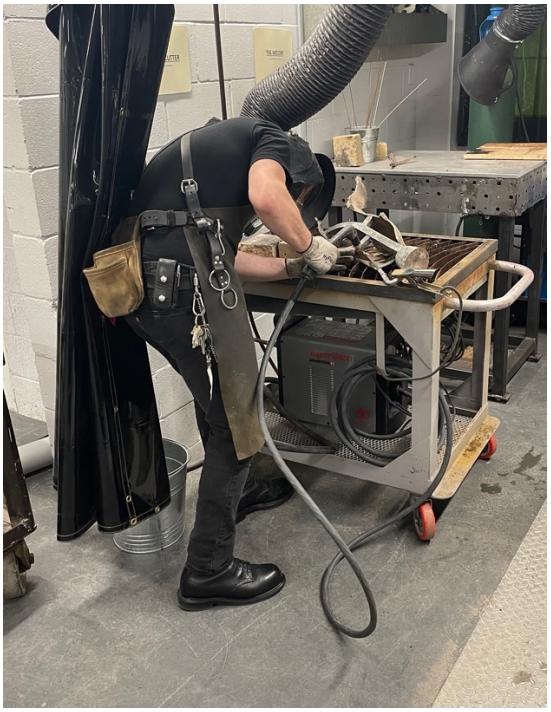


Figure 59: Foundry Pour - OCADU Foundry

Figure 60: After Finishing and Patina – on display at ADA SLAIGHT STUDENT GALLERY OCADU, March 2-5, 2022

3.7 CHALLENGES AND LIMITATIONS

My greatest challenge in this project has been explaining my methodology to others. It has been challenging to articulate what I am thinking and what mental processes have led to my work. I write concisely and am often challenged to convey my thoughts through speech. As such, I prefer to speak through my art, despite the inherent limitations in this method of communication.

Another challenge is the creation of large sculptures using 3D printing methods. Affordable 3D printers have limited build capacities. The global pandemic and university shutdown limited my access to the university's workshops, providing yet another hurdle.

3.8 EXHIBITION

My Thesis Exhibition took place in the Ada Slaight Student Gallery on March 2-5, 2022. From the east, one enters the gallery into a small entry space with a partially frosted glass wall on the south (left) side (Figure 61).

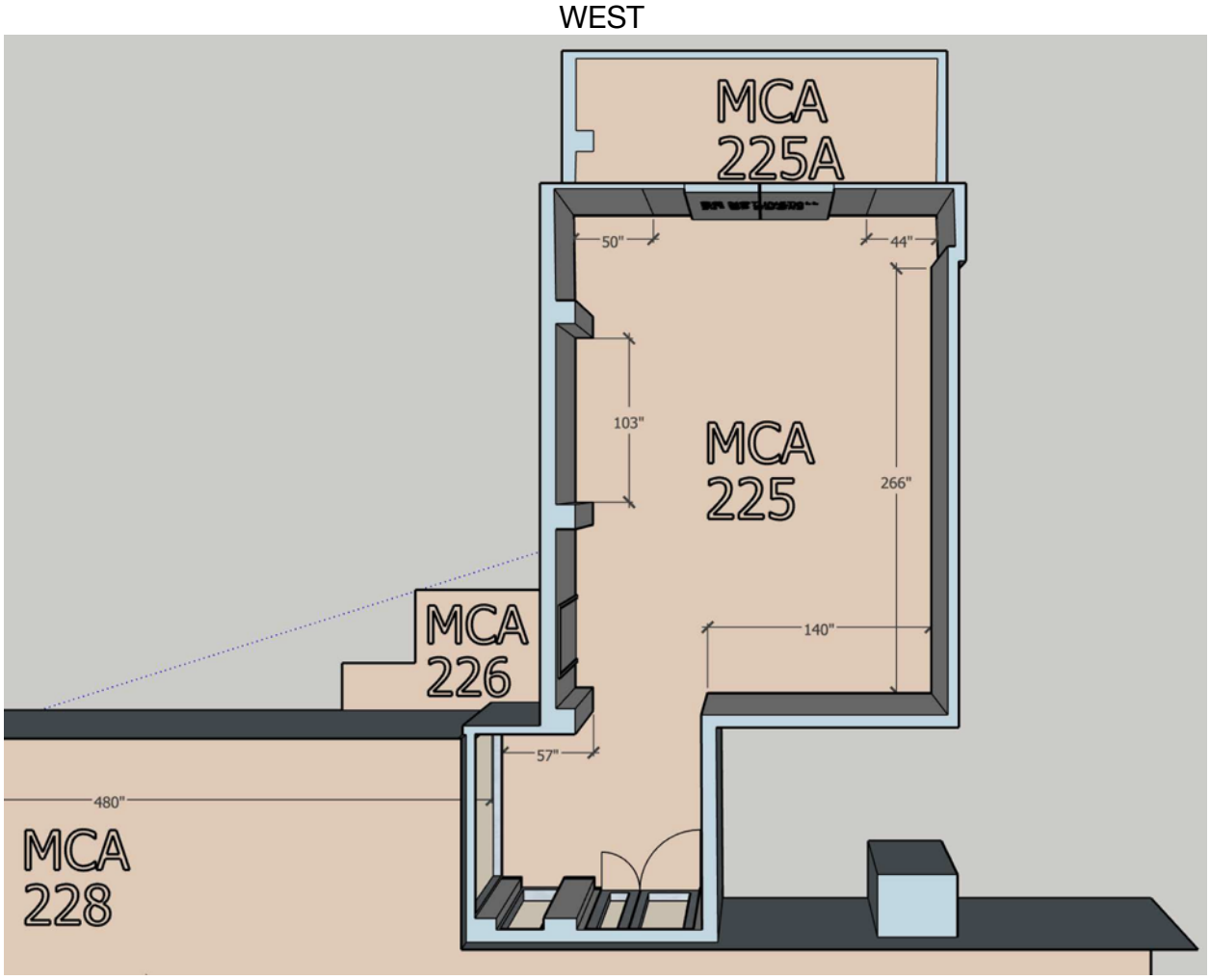


Figure 61 – Ada Slaight Gallery Floorplan (from OCADU, Ada Slaight Exhibition Agreement)

On the north wall of the entry space, I placed the title (Figure 62):

What Is This?
Figuration – Inflection – Abstraction
David Fisher

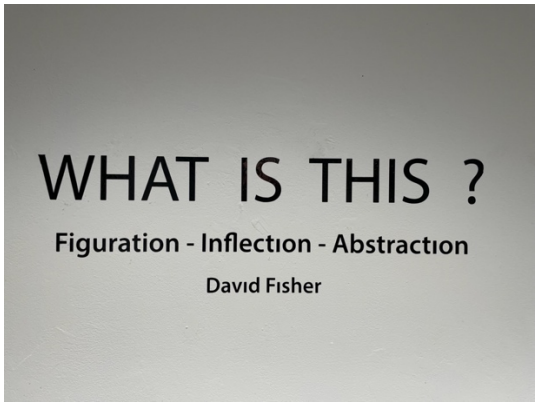


Figure 62: Exhibition Title, Ada Slaight Gallery Wall

What is this? Is a Zen *Koan*. In Zen Buddhism, the Japanese term Koan is a succinct paradoxical statement question used as a meditation discipline for novices. The popular Korean koan 이뭣고, 'What is this?', calls us to wake up to the moment and attend to whatever we are experiencing. Ultimately, it calls us to question the nature of the self. This question that can be universally asked of any entity, occurrence, thought, or emotion has been in my mind throughout my time in the IAMD programme and the creation of these pieces.

The subtitle, *Figuration – Inflection – Abstraction,* is meant to prepare the viewer for what is to come. Most will be familiar with the terms Figuration and Abstraction as they apply to art. Inflection is a term that I have used to describe the tipping point between Figuration and Abstraction, where a piece achieves the non-dualistic state of being neither Figurative nor Abstract, but both.

Left of the title, and visible through the partially frosted glass south wall, I placed the two female figures (*V_n_s No. 3* and *4*) first to greet the viewer (Figure 63).

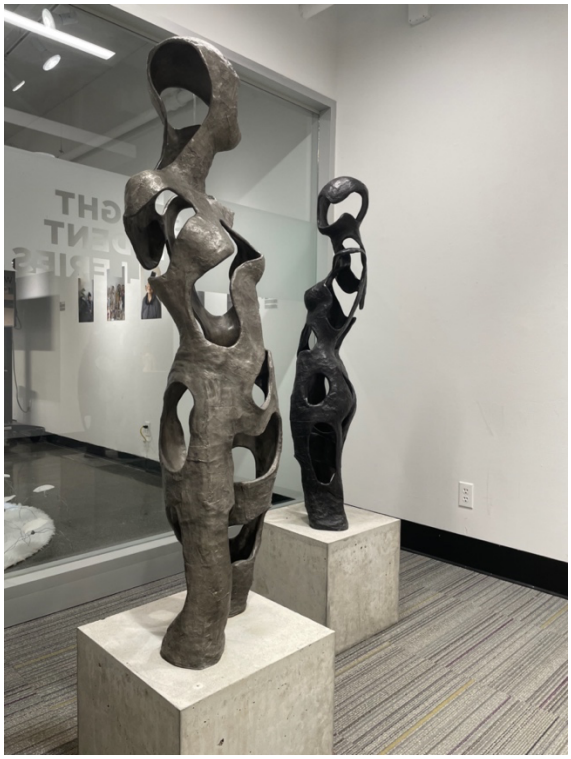


Figure 63: Ada Slaight Gallery entry and *V_n_s No. 3* and *4* (2019) – Bronze (14” x 12” x 51”)

While their initial creation just preceded my entry into the OCAD IAMD programme, I included these in my thesis and exhibition because they represent my first exploration in the process of working towards abstraction, starting from the figure.

The main gallery space (Figure 64) contained a series of sculptures on 12 plinths. Additionally, on the west section of the south wall, I projected a video loop showing a selection of quotes and descriptions representative of my methodology and a video entitled *“Crate Meditation.”* The sound of Tibetan singing bowls accompanied the video providing a meditative quality to the space.

Figure 64: Ada Slaight Gallery – southeast view

With one exception *(v.i.),* the sculptures on display are related and representative of my methodology. They all share my attempt to achieve a state of inflection between figuration and abstraction, a non-duality that encompasses both.

The exception is the sculpture *If – What If? What If Not? [Alternate title: About the Artist]* (2019) (Figure 65). As previously described, it is a sculptural autobiographical timeline. I included it in the exhibition to share something about myself with the viewers.

The piece is reminiscent of a Totem Pole and is assembled like an Inukshuk. Accordingly, I felt that its supporting plinth was an appropriate place for my Land Acknowledgement.

Figure 65: - *If – What If? What If Not?* [Alternate title: *About the Artist*] (2019) - 3D printed PLA (~4” x ~4” x 58”)

I find the human figure infinitely engaging and have used the male torso (a replication of the Classical Greek Canon of Polykleitus, modelled in ZBrush®) as a starting point for many of my pieces.

Figure 66 – *Male Torso Abstractions* (2020) - 3D printed PLA (size = variable; maximum height = 290 cm)

This series of sculptures is entitled *Miscellaneous Male Torso Abstractions (2019-2021)*. Using a variety of 3D modelling software programs, the forms were transformed through increasing levels of Boolean subtractions into a series of sculptural proposition.

On the tallest plinth are five of eight sculptures derived from this deconstruction exercise by way of Boolean subtractions (Figure 66). One of the pieces, *Male Torso Abstraction No.4* (Figure 67)*,* best represents the Inflection Point for the series. I divided the original form into seven printable parts and glued them together to make a larger sculpture.

Figure 67: *Male Torso Abstraction No. 4* (2020) - 3D printed PLA (10” x 13” x 19”)

The parts and their incomplete articulations are more abstract, further removed from the original torso from which they are derived.

Sculpture *MTA No. 4/2* was displayed with a miniature mannequin. I consider this a maquette for an outdoor sculpture at a larger scale (Figure 68).

Figure 68: *Male Torso Abstraction No. 4 / 2,* Bronze (6” x 10” x 18.5”) (with a miniature mannequin for proposal of scale)

Figure 69: *Oracle* (2022) – Bronze (7” x 12” x 19”)

A video [filmed by Jamie Zingone, @vs1.ent (2022)] documenting the gallery space and the exhibition is available is available for viewing in the OCAD University Open Research Repository (See Appendix I).

3.9 SIGNIFICANCE

Thomas H. Schram, in *Conceptualizing and Proposing Qualitative Research,* in a section entitled *Significant Theories and Theories of Significance,* writes:

> Whether or not you are all that explicit about the theoretical dimensions of your inquiry, a basic rule of thumb is that, as a researcher, you must know what you are up to and be able to explain to others what this is. To this end, you should embrace theory to the extent that it is useful in serving your purposes, not the other way around, and not simply for show. (Schram 62)

Schram recommends considering the following question:

> "What do I need by way of Theory – or more modestly, by way of concepts – to help me make sense of, and develop a sound argument for, what I am doing, how I am going about it, and what I am choosing to attend to in my fieldwork (62)?"

In this section, I hope to address this question. I stress the significance of my creative work that has been driven by the intersection of art, science, and philosophy, and situate it within the field of Interdisciplinary Art, Media, and Design.

"Consciousness is notoriously difficult to define. It is paradoxically our deepest mystery and our most intimate reality" (61). This thesis uses concepts of consciousness from philosophy such as nonduality and panpsychism. These concepts contrast Cartesian dualism*,* which considers the immaterial mind distinct from the material body. Descartes and all since have been unable to explain how the two interact. Philosopher Christian De Quincy argues that since Descartes, our collective actions – as nations, governments, businesses, and individuals – are pathological. Pathological because materialistic science has ignored all subjective, nonquantifiable, unmeasurable, unpredictable, and uncontrollable mental phenomena, including values, meanings, and purposes. And also, pathological because they take no account of the profound interdependence of living systems (4-5). In my art, I want to raise awareness of this pathological divide with the hope of engaging in conversation towards healing.

Nonduality, in Zen Buddhism, is the absence of subject-object duality. Panpsychism is the idea that consciousness/mentality is fundamental and ubiquitous in the natural world. I am exploring the use of figuration and abstraction as a metaphorical pathological divide that would benefit from healing.

There is an irony in this exercise. As a reconstructive surgeon, my practice has been guided toward healing through reconstruction. In contrast, my art practice is directed towards healing through deconstruction to realize unity. By creating a form that is neither figurative nor abstract but striving to be simultaneously both, I aim to create a paradox. In this uncertainty about accepted opposites (matter and mind, objective and subjective, fact and value, quantitative and qualitative, mechanism and meaning, order

and chaos, other and self, humanity, and nature, non-conscious and conscious, space and time, particle and wave, real and virtual) contemplation is provoked.

I anticipate that my professional life as a reconstructive plastic surgeon will be different because of the creative freedoms provided by working within 3D digital spaces in my art practice. This has relieved some of the stresses of working as a surgeon where the goals and methods are so well defined and the consequences of my actions so dire. It is also not inconceivable that some new surgical creativity could result from my artistic explorations.

Research in the interrelationships of figuration and abstraction within the 3D digital domain, and the resulting sculptures, brings new insights into the relationships between materials and space. In my research, I have explored how we perceive reality differently when inside a digital environment compared to an analogue experience.

The works represent new research in 3D digital sculpture methods from which other researchers may benefit. The procedures of superimposition and reduction can be performed, perceived, and adjusted throughout the process, allowing me to produce a physical sculpture that could not have been preconceived nor be created by manual analog means. Ultimately, these methods and the methodologies will continuously inform my future sculpture practice.

Future directives include further sculptural explorations towards the inflection point through different strategies (for example through the addition rather than the subtraction of form) and with different figures as starting points. I remain interested in producing public art and would like to produce these sculptures at a larger scale.

3.10 CONCLUSIONS

In this art-based research, I have explored the potential boundaries, spectra, and interactions between a figure and its abstraction. I have used abstraction and figuration as a metaphor for mind and matter. I have used this metaphor to evoke in the reader a consideration for non-duality, which I propose is a healthier philosophy than dualism. Through superimposition of forms, I have challenged the concept of individuality and separateness that hinges on the notion of a bounded self and a clear demarcation between subject and object. A process of 3D digital reduction of the human figure through sequential subtractions has been used to find the *Inflection Point* between a human figure and its abstraction. I propose that this term be included in the dialogue of figuration and abstraction.

The sculptures were exhibited in the Ada Slaight Gallery, OCADU, 100 McCaul Street, March 2-5, 2022. I hope to recreate these sculptures in large scales for public spaces.

The contents of this thesis will continue to inform my continuing artistic practice.

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4. LIST OF FIGURES

APPENDIX I

1) Fisher_Exhibition_AdaSlaightStudentGallery.mov

   A video [filmed by Jamie Zingone, @vs1.ent (2022)] documenting the gallery space and the exhibition is available is available for viewing in the OCAD University Open Research Repository (uploaded 2022-04-28).

2) Fisher_ThesisDefence_2022-04-07.mov

   A prerecorded version of my Thesis Defense presentation is available for viewing in the OCAD University Open Research Repository (uploaded 2022-04-28).

APPENDIX II

FINAL REFLECTIONS

I feel that I have undergone a significant personal change during these past three years. I can attribute most of this change to the process of producing this thesis and the creation of a body of work, and not merely to the passage of time. I identify at least three particularly impactful influences; my classmates, my teachers, and my research. My classmates have set wonderful examples of what it is to *be* an artist. My teachers have gently and proficiently guided me through the process. My research in meditation and consciousness has opened my mind.

My initial research proposal was based on my interest in Public Art. I hypothesized that for a public artwork to be successful it needed to engage the public, and that this engagement could be measured. That research proposal was born out of my familiarity with the Scientific Method. My fellow students were wonderful exemplars; they each had a methodology that informed their own creativity. I came to realize that my initial research proposal did not inform my own artistic practice in any way.

My teachers, and principally my primary advisor were able, through selective encouragement, to steer me towards a methodology that would indeed inform my art practice. There would be no hypothesis.

The summer prior to my first term at OCAD marked my foray into Meditation and Mindfulness practice. This spurred my interest in theories of consciousness, and I was introduced to the concept of non-duality. I have come to believe that the identity with the self and one's thoughts may be dangerous. Self-identity and particular identity with any subgroup of the population is an *a priori* condition of divisiveness.

Art can challenge the status quo. The duality of mind and matter, of self and other, is my challenge.

Reconstructive surgery and sculpture have much in common. Both engage similar cerebral functions of observation, analysis, imagination, and creation through the manipulation of matter. Additionally, both have the potential to heal. I truly believe that art has the potential to bring people together and invoke consideration of ideas; ideas that may be obscured by unappreciated biases. Through the deconstruction of the figure, I am hoping to engage with the viewer in something more than the simple recognition of an entity or gesture. Through deconstruction, I am hoping to invoke a consideration for a deconstruction of the self and thereby a recognition of the whole.

As an individual, I have brought together Art and Surgery. In the future, I hope to explore mechanisms to bring Art and Surgery together in practice.

The role of serendipity and error in my sculptural practice cannot be undervalued. Approaching an artistic project with the closed mind of an expert is limiting. 3D digital environments present virtual images that I otherwise would not have contemplated. In a sense, I have collaborated with (and not simply used) these 3D software programs to create my sculptures. Moving forward, I would like to further embrace the Zen concept of *beginner's mind* - the concept that the beginner's mind is open to many possibilities. Collaborations with other artists will provide additional means of introducing the unforeseen into my work.