VISUAL REPRESENTATION OF THE NATURE OF EXISTENCE

A CREATIVE PROJECT

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FOR THE DEGREE

MASTER OF ARTS

BY

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STATEMENT OF THE PROBLEM

In my creative project I will be asking the question: Given the present state of human understanding and conceptual imagination, what is the underlying factor of the pervasive continuity, its apparent ceaselessness, within the nature of the universe, and how might that be depicted through painting? I seek to investigate the possibilities of existence within the human scope of knowledge, intuition, and consciousness. The paintings are intended to contemplate the basis of the laws governing all existence. For this project, I will be speculating on answers to that question through painting using experimentation with processes and forms. An underlying question might be, “How do science and spirituality shape my perspective of reality and of my imagination?”

I also hope to stimulate interest, initiate discussion, and awaken deeper awareness of the human experience within the scope of existence through the use of visual phenomena. The problem consists of articulating solutions to these questions through visual imagery and the process of painting. I view my creative process as a personal journey of growth in which I seek clarity about the world. Throughout my process of painting, I desire to contemplate, discover, and express the nature of potential theories concerning the existence of this universe. The ultimate goal of the work is to engage viewers in their own process of discovery while questioning the nature of reality and all of its possibilities as they ponder the visual phenomena.
There are artists with whom I feel I share a kinship because the underlying thought process of their work is similar to mine. As a contemporary artist, Andy Goldsworthy’s co-creation with nature and especially his repeated use of the circle in his design are significant. Humans have the ability to co-create with nature, which generally involves altering, controlling, and repositioning the raw elements of the earth. Although it appears that other living beings on earth are at one with nature, they too co-create in their own way. Sometimes humans seem to forget that they too are one with nature. Much of Goldsworthy’s work involves being in the present moment in a natural setting, using only raw materials that come from natural surroundings, that are not man-made, to create designs and sculptures. The sculptural designs may last from only moments and others for years. More recently Goldsworthy has been incorporating more man-made equipment and environments into his process as he has come to realize that the human mark on the natural world is just as much a part of nature as all else that exists. The work is documented through the use of photography. Common themes in his work are time, change, and the cycles of birth and death. I too am interested in expressing some of the same themes in my own work.
Athena Tacha is a versatile sculptor, installation artist, and photographer who is heavily influenced by science. She has created over fifty commissioned public works having to do with fluidity in nature, the cosmos, gravity, and quantum mechanics. She combines the imagery of the cosmos into sculptures made from earth elements such as stone, wood, and silicone. Tacha and I both look to the natural world around us to experiment with and visualize some of the scientific concepts we have come to know from books and articles. She is also aware of the repeated patterns in the universe without regard to scale such as veins in a leaf that appear to be in the same pattern as trees in a forest. Much of her work expresses an effect similar to the ebb and flow of tides. It shows fluidity through repeated lines and patterns.

Daniel Zeller creates biomorphic forms by drawing with colored inks or graphite on paper, however not all of his work is in color. None of the forms stem from any known organisms. Yet when viewed, one wonders if they might actually exist somewhere. Just as we are surprised when we discover an organism that was previously unknown to us on our planet, as if we already knew all that exists, Zeller’s imagination of what could potentially exist seems infinite.

I am interested in his process of making. He sits down and randomly picks up a pen or pencil and begins by repeating some lines or shapes, and then he will try a different color and start a new pattern, but always building off the previous one. He does not make plans or overthink his ideas, he just seems to let the shapes and lines flow out of him onto the paper. In comparison, I also plan very little in my work, although I do usually have a general vision in my mind before beginning the form. For me the choice of the size and shape of the surface seems to be important because this guides the creation of each piece. However, once I become
involved in a piece, like Zeller, I am always building on the previous marks I have made making quick and flowing choices. I create guiding rules in my mind as I am making the work about what can be in the work and where specific shapes and forms can are allowed to exist and then I follow my rules throughout the rest of the piece. When completed, Zeller’s obsessive doodling usually resembles an unknown biological organism, a map of a new land, or the surface of a planet. Zeller’s work reminds us that whether evolution takes place in nature or on paper there will always be growth, mutation, and transition.

Georges Seurat has always intrigued me and I have consistently returned to his work in wonder. As a Post-Impressionist painter, Seurat insisted on painting colors from a scientific perspective. All impressionistic painting places emphasis on painting the qualities of light. However, unlike many of his fellow artists, Seurat took a scientific approach to painting light. This involved a more strict color palette using mainly pure hues from his uniquely created color wheel based on the writings of the American Physicist, Ogden Rood, in his book, Modern Chromatics. Seurat meticulously planned his paintings and was deeply inspired by light and its effects on the objects being painted.

Seurat’s methods were termed Divisionism and Pointillism. These terms are not interchangeable. Pointillism simply describes the way in which the mark is made on the canvas as a dot or point (Remer). Divisionism describes the way in which Seurat used pure pigments that were juxtaposed with each other on the canvas (Remer). These juxtaposed dots would optically be mixed within the viewer’s eye to create the illusion that one is looking at a third color. An example of this would be the positioning of the two colors vermilion red and ultramarine blue next to each other. In the viewer’s mind, one would not see the individual
colors of red and blue, but a new hue of a reddish violet. The technique of Divisionism was used specifically to create a more striking luminosity that was considered to be much stronger than if one were to merely pre-mix red and blue on a palette to create a violet hue that would then be applied to the canvas (Gamwell 117).

In Seurat’s work one can clearly see the formal elements at work despite the use of the Pointillism technique, which inevitably distorts the objects’ edges to some extent. This distortion of the objects is dependent on the distance from which one views the painting. If one stands very close to the painting, one sees something completely different with each view or turn of the head. The painting actually takes on a whole new form of being where it can become a total abstraction.

While the science of color and light certainly contributed to the unique style in Seurat’s work, I also propose that perception, by means of the unconscious, also had a great impact on his work. I believe that the unconscious mind may be powerful enough to hide secret clues of what is to come and is exhibited through the human affairs of art and writing. The unconscious is a place in the mind where we may gain our insights or intuitions. I believe that Seurat was tapping into his unconscious while he painted. I ponder these possibilities because when I look at a painting by Seurat I get a sense that he was on the brink of a visual discovery that would come about at the turn of the century only fifteen to twenty years later.

That discovery is the concept of the photon. Prior to 1905, most physicists believed that light was a wavelength. However, with the work of several scientists working around the same time period, the idea that light could function as a particle or photon, which is the proper name for particles of light, and a wavelength at the same time came to be accepted by the scientific
community. It was in 1905 that Albert Einstein produced the theory of light quanta in which light could exist in tiny discrete packs of energy later called photons. This theory was credited to the work of Max Planck in which he was able to mathematically describe atoms in the same way. Einstein borrowed the math and alternatively applied it to light. This work earned Einstein a Nobel Prize in 1921 (Baker 2007).

When looking at Seurat’s work, I come back to the idea of this abstraction of dots that appear as particles of light. Seurat was attempting to consciously capture the luminosity of light, which he did quite well. In order to capture that luminosity he used strategically placed dots of color that give me, a viewer of a future time period, the impression of a distinct and clear visual metaphor for the idea of a photon. I speculate that Seurat was unknowingly expressing a possibility that would later be proven true and that it could also be possible that scientists, such as Einstein, were inspired by these works of art to create mathematical equations that described light in the way these artists were representing it. In essence, insights may be gained from the unconscious which are in turn reflected in the creations of humankind. Those creations of the arts can affect the sciences and vice versa. In my mind, Seurat’s work conjures up ideas of particles, light, and intuition, from which I gather inspiration.

Science

This project is a culmination of my journey of discovery and experimentation through the use of paint. I am interested in illustrating the basis of existence. I believe that the basis for existence in our universe is the concept of duality. In the universe there are various polarities which are in opposition. These polarities serve the purpose of creating tension which seeks balance. When the balance is achieved, then something can be created. The dual opposing
factors that exist are in a constant state of fluctuation on a continuum with each other always seeking balance. There are many dualities that exist in this universe without regard to scale, the largest of which might be the expansion and gravitational collapse of the known universe, which produces changes in entropy. On one scale, these entropic changes have allowed for the evolution of life and consciousness.

In the universe, there appear to be patterns that exist in which the mathematical and visual coincide. This could be considered one example of duality. Laws of nature, many of which have not yet been formulated, tested, or understood, govern every aspect of every object in our world. What appears also to be random in our universe is actually based on patterns that can be simulated through the emerging field of physics called non-linear dynamics, as fractal geometries. Anything visual in nature, including paintings, can be described mathematically. Likewise, an underlying mathematical structure can manifest as an object of nature or visual art form. One can discern from this that everything correlates to a numerical code. Knowing and understanding this concept has contributed to my process of painting by allowing me to perceive something as subjective as my artwork to be experimental and objective.

Quantum physics seeks to unveil various sub-atomic particles, known and unknown, and then attempts to mathematically explain and describe the behavior of such particles. Cosmological physics seeks to mathematically describe, explain, and predict the evolution of the very space-time of the universe itself. Naturally, to arrive at a theory that would unify everything in the universe, scientists must create models that can explain both the behavior of particles at the quantum level while simultaneously explaining the nature of the universe at every other known scale. Behavior of particles at the subatomic level would seem to indicate
how everything works in our physical reality because they could be viewed as the fabric of the cosmos.

The Higgs-Boson particle, or lack thereof, has currently become a focus for speculation in the scientific community. At the CERN facility, near Geneva, Switzerland, which houses particle accelerators and detectors, scientists are hoping to identify a particle, the Higgs-Boson, which supposedly has mass. Without mass as a basis for subatomic particles, current quantum theories could become null and void. If this particle is not identified, it could have serious consequences in terms of cosmological theories as well. If no mass exists at the subatomic level, questions will again arise about how matter is formed. If the Higgs-Boson particle is discovered, we may be led to wonder if yet another smaller particle is yet to be discovered, leaving one to wonder if there is an end in sight in either direction of scale.

On the human scale we have sensory organs that are able to perceive the world around us. We have created many technologies to aid us and act as extensions of our senses, which enable us to view the world around us more deeply. Despite our efforts, there are many limitations to our views that still exist. However, because there will undoubtedly always be limitations when attempting to map our world and existence through the senses and technology, I have decided to take in as much of this information about science and technology as needed, but then turn inward on myself and ask if this information resonates with my heart and mind. The outcome of all of this becomes a visual expression of my view of the basis of reality.

**Spirituality**
One cannot judge for certain how large or small the universe is; although we must assume that it is infinite in its existence. However, if more than one universe exists we may also assume there are infinite universes. I liken this idea to the example of a Russian stacking doll set in which every doll that is opened reveals yet another smaller doll. The universe is ever expanding and contracting in a constant state of flux, yet never-ending. Whether there is one that encompasses all or an infinite number of universes is of no matter. This is the view of Taoism.

As humans we can at least agree that there will inevitably be an end to our individual conscious lives on earth; but in the universe there is no ending. There is change or transition, but not death. And so because we are part of this universe, we are not separate as we are made up of the same universal materials. We too do not die, but change. Our bodies change and decompose only to give life to other beings; nothing is in vain in our world. Most of us feel much less certain of the outcome of our spirits, the consciousness within us, or wonder if such a concept exists at all.

Religion and science both seek to answer questions pertaining to the topic of existence. We have come up with many propositions for the possibilities from the ideas of nothingness to notions of heaven and hell, but only some people seem sure of themselves in answering this question. Extreme cases of these types of people are usually either revered or deemed fanatics. One of two things is for certain and that is that people who indefatigably answer this question have either turned inward for an answer or never really asked the question in the first place; instead just accepting information from another source.
I have found that turning inward is an important aspect of my life path and my artwork. Ultimately, my artwork is an expression of my life. One can absorb information and knowledge of the universe through observation, experimentation, reading, and discussion. However, because there are no definitive answers, to draw any relevant conclusions about one’s own life, one must turn inward in some way.

There are established systems in Eastern thought that instruct on different ways to go about the process of seeking answers from inside oneself and studying one’s life and mind. For example, Buddhism, in addition to having specific belief patterns or observed knowledge dependent upon one’s point of view, is also a type of psychology in which one relentlessly seeks liberation through the study of one’s own mind. It seems logical that the person studying one’s mind should be oneself, but that is not usually how we view this topic in Western culture. In Western culture, we seek out other people, psychologists and the like, to observe our own minds for us. The idea that a person could observe and comprehend the mind of another is absurd. However, to give psychologists some credit, they are able to observe behavior and listen, which is also of value. Ultimately, only the person who is the object of observation can ultimately decide their own truth in life. Buddhism and Yoga are systems that seek liberation and enlightenment, but Taoism is slightly different in that it is involved with the process of the observation of the natural world, but does not believe that the human mind is capable of comprehension of the nature of the world. In coming to understand this philosophy one is, in a sense, liberated.

The philosophies contained in Eastern religions or philosophies regarding the nature of reality continually inform my work as an artist and a human being. However, I was raised in the
Catholic religion, which is also part of my knowledge base. I do not consider myself a religious person, but instead a spiritual person on a quest for clarity concerning my position in the present space-time. I do not seek out answers from religions or philosophies; rather I enjoy how ideas and concepts from them kindle my own ideas of what is possible. All religions are based on the observations of the natural world and have been used as a means of explanation for inexplicable phenomenon. Some have been heavily indoctrinated and politicized to the point at which one must question the motives of those leading the herds of followers. That does not mean one should wholly disregard origins, myth, and explanations of religions. A spiritual thought process integrated with scientific theorems, and my own observations and intuition of the natural world form the basis for my paintings.
DESCRIPTION OF ARTWORKS

As these artworks have come to life I have felt like a scientist or a child on a journey of discovery through experimentation. With each drop I learned something new about the paint and in turn something new about our universe. The paint abides by the same laws that all objects in the universe do and it is therefore fascinating to watch how it interacts with its circumstances.

Chemistry of Materials and the Physics of the Reaction

Chemistry is a component of the work in the sense that it has much to do with the materials being utilized. Using opposing chemical materials, in which the pigments are suspended, produces a reaction that builds the imagery of this work. The paint, suspended in a fluid, is placed or dropped onto the canvas or board, which is covered in a more viscous fluid and then disperses according to the laws of physics. The pigment particles are carried along through this dispersion effect and then they eventually settle into a permanent location. The particles always disperse in the same manner with every drop or placement of paint. The dispersion creates a circular form that radiates out from a center point. There may be lines that radiate outward from the center point and there are usually circles or spots of coagulation where the pigment particles settle. The pigment particles also appear to form an outer ring around the center point, which looks like a solid line. At times there exist variations of the
dispersed circular form that are created by means of circumstances such as a surface that was not completely level or varying the proportions of the materials being used.

Every circle that is created has the potential to be a perfect circle. However, most of the circles that are created are imperfect due to the variations of the circumstances mentioned above and due to the high probability of the various circles expanding outward and colliding with one another. This colliding of circles causes new shapes to become defined from the original circular shape. This is a metaphor for evolution wherein the circles represent the origin of the evolutionary process. The shapes press up against each other, seeping into nooks and crannies and seeking room to expand into their full form.

These circles and mutated circles are layered onto a prepared canvas or board. They may be layered several times to achieve the desired effect. These circular forms are then used to build other larger forms of various shapes and scales. When viewed from a distance one can see yet another metaphor in which the circles that are continuously mutating are also seen as the building blocks on this larger form. Repeated patterns of the larger formations that are explored include the idea of using the small circular dispersions to create larger circular formations. In another perspective, as viewed on some canvases, larger pieces of circular formations, which have been zoomed in on, show a detail aspect of a form.

I have been working with circles as a theme in my artwork for many years prior to this body of work. For me, using circles or spheres is an important component of the composition because of their perfection, beauty, and symbolism. In my previous, work I painted individual circles by hand to create a larger abstract formation, usually representing something cosmological or biological. This process was quite time intensive. I have recently discovered
this new process, discussed above, for making the circles that make up the abstract formations. This process speeds up the production and appears even more mysterious and beautiful.

**Colors and Light**

I have limited my color palette to black and creamy white. Limiting the palette has allowed me to focus more on the formations. As in black and white photographs, the color is not important as it would merely distract from the forms. The black and white allows viewers to imagine the forms to be representative of many ideas or objects which is favorable. It is important that viewers draw their own conclusions about the meaning of the work.

Black and white bares significance in Taoism and in the science of light. Black is the effect that is produced by the absorption of all colors on the spectrum of light. White is the light that produces all colors. Black absorbs color and white creates color. They are opposing non-colors, yet both are made up of all colors. They oppose one another yet fluidly transition in and out of one another, blending and transforming. Light is in an infinite state of movement on its spectrum from black to white and vice versa. They are the polarities of light. In Taoism, transformation in nature is the only concept that one can depend upon. Respectively, the non-colors, white and black, the numbers one and two, the shapes of a circle and square and their corresponding forms of spheres and cubes, and the male and female are all examples of the polarities that exist in the universe with regards to Taoism. The yin yang symbol was developed in Taoism as a design that wholly expresses the concept of duality.

**Description of a Specific Artwork**
In the piece, Circles’ Intersection, there are two canvases. Each canvas is 4x4 feet. The two canvases form a pair as do all of the other pieces from this body of work. In canvas number two, the “negative” space is creamy white and the “positive” space is black. In canvas number one it is the opposite, where the black is the “negative” space and the creamy white is the “positive” space. The colors in the “positive” of both paintings create an obvious formation on a backdrop of seemingly void space.

The void area on both canvases is actually not void at all. It contains circular formations of the opposite colors that completely fill in the space. For example, in canvas number two the “negative” space is created by creamy white circular formations. The “positive” space of canvas number two is created with black circular formations. I have chosen to use the terms “positive” and “negative” space, for lack of better terms, to describe the visual landscape of the canvas for the viewer. However, the spaces should be viewed as interchangeable because I want the viewer to wonder which area is to be thought of as “positive” and which is to be thought of as “negative”.

In Circles’ Intersection, four quarters of four different circles are pushing up next to one another to create an intersection. This intersection forms a cross shape. In the center of the intersection of the cross is one smaller circle of the opposite color. This smaller circle appears to be creating a vortex, in which other circular formations may be getting vacuumed. It could be understood that on the other side of the vortex is the opposite image, hence the pair of paintings. The pair of paintings contain the same image, but in opposite overlapping colors that appear to be able to move into and out of one another. Through the center vortex of one of the canvases, one can visually travel through and come out on the other opposite canvas.
Although each image is contained on either a canvas or board, the viewer does not know where the images end or begin. The canvases in this body of work may be analogous to the idea of photographs, which have been taken at various focal lengths, of an unidentifiable abstraction. The viewer is only seeing a piece of a potentially infinite picture. Therefore each image may be thought of as infinite. The scale of the “object” being viewed should remain incomprehensible.
CONCLUSION AND EXHIBITION STATEMENT

This body of work contains two components. One is my process used in making the work. This process implements a technique whereby the physical and chemical actions of the painting materials are also the subject of the expression. The fundamental phenomenon of the materials is an expression of the laws governing the universe.

The second component is the final visual phenomenon. I am attempting to make an invisible concept visible. The final images illustrate the concept of duality as a symbol of all dualities that might be apparent. Using only black and white non-colors, the white is the source of the black’s absorption. The two are fluctuating in and out of each other as a metaphor for the expansion and contraction of the universe, the rise and fall of a pulse, birth and death, and any other duality that exists in the known universe. This fluctuation and tension between two polar sources, which are two sides of the same coin, continues infinitely with the purpose of seeking balance.
REFERENCES


APPENDIX

Figures

Figure 1, Andy Goldsworthy, *Hanging Hole*, 1986 (Andy Goldsworthy Digital Catalogue Volume 1, 1976-1986)
Figure 2, Athena Tacha, *Merging*, 1986 (oberlin.edu/faculty/atacha/tacha2.html)
Figure 3, Daniel Zeller, *Relative Interference*, 2008 (artnet.com)
Figure 4, Georges Seurat, *Sunday Afternoon on the Island of La Grande Jatte*, 1886 (webexhibits.org)

Figure 5, Detail of *Sunday Afternoon on the Island of La Grande Jatte* from above the dog (webexhibits.org)
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