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The Metanarratives of the Fourth Industrial Revolution and the Collective Cognitive Dissonance of Metamodernist Discursive Formation

John R. Lewis

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THE METANARRATIVES OF THE FOURTH INDUSTRIAL REVOLUTION AND THE COLLECTIVE COGNITIVE DISSONANCE OF METAMODERNIST DISCURSIVE FORMATION

by

JOHN R. LEWIS

(Under the Direction of Jason Hoelscher)

ABSTRACT

My artworks explore the impacts of the technology of the Fourth Industrial Revolution, which began in the early 21\textsuperscript{st} Century, upon global society and the human psyche. My works are instantiated by multi-year research in the areas of social psychology, cognitive dissonance, computer evolution and artificial intelligence. My body of work portrays a cautionary sensibility regards new technologies such as robotics, quantum supercomputing, Artificial Intelligence, commercial space travel and nanotechnology. In addition, my artwork attempts to increase awareness of the phenomenon of cognitive dissonance.

The perceptions and cognitions of artistic viewers relate directly to the psychological phenomenon of cognitive dissonance. Beyond that, a population over several generations may be influenced by the fine artworks of their social moment in a social psychology phenomenon known as collective cognitive dissonance. In this paper, I will review these two cognitive phenomena and how the phenomenon of collective cognitive dissonance is ubiquitous in the current social moment of the early 21\textsuperscript{st} century and in metamodern artworks.

After reviewing the historical examples of USSR and Nazi Germany socialist realism, I will focus on what is now called the metamodern era. I use arguments from past and current examples to show how this phenomenon of collective cognitive dissonance is made active in fine artworks. I believe intentional and unintentional ubiquitous metanarratives, as portrayed in artworks, capture the worldviews of large subpopulations (beyond nation-states) within the internetworked globalized nanotechnology community we inhabit.

INDEX WORDS: Collective cognitive dissonance; Cognitive dissonance; Self-justification; Confirmation bias; Collective unconscious; Archetypes; Mythology; MFA; Social Psychology; Art; Socialist realism; Totalitarian art; Artificial intelligence; Social moment; Metamodern; New romanticism; Oscillation; Pop culture; Discursive formation.
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by

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COLLEGE OF ARTS AND HUMANITIES
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CHAPTER 1

INTRODUCTION

I believe in using creative works to inspire people to better themselves by exploring new insights, moving into life-long learning, and realizing their full potential. My artworks align with metamodernism as defined by Vermeulen and Van den Akker in their 2010 article “Notes on Metamodernism.” I create stretched canvas artworks with metamodernist themes such as man’s search for meaning in grand narratives (metanarratives), new mythologies and the oscillation between opposites. I am focused on the impact on human society and the human psyche of the technologies and systems of the Fourth Industrial Revolution. I am not a Neo-Luddite, but I express a cautionary note in my artworks regards the advances into greater automation, nanotechnology, robotics, Artificial Intelligence, Big Data analytics, genetic engineering, quantum supercomputing and the commercialization of space. I believe that my artworks, which have focused on these impacts, are aligned with aspects of the metamodernist discourse. My works often portray the tension and oscillation between opposites.

Perceptions and cognitions of artistic viewers relate directly to the psychological phenomenon of cognitive dissonance. Beyond that, a population over several generations may be influenced by the fine artworks of their social moment in a social psychology phenomenon known as collective cognitive dissonance. In this paper, my interpretation of these cognitive phenomena has led me to the conclusion that they are ubiquitous in the current social moment of the early 21st century given the efficiencies of internetworked communications, social media pervasiveness and the interactions of Artificial Intelligence algorithms with human beings.

Many of my artworks allude to cognitive dissonance, collective cognitive dissonance, and New Romanticism metanarratives, which relate to my interest in the apocalyptic and the burgeoning of advanced technology, such as the accelerating development of Artificial Intelligence and robotics. An unanticipated “byproduct” of this metamodernist focus within my
artwork is the social psychology phenomenon of cognitive dissonance, which I elaborate in the next chapter.
CHAPTER 2
METAMODERNISM, METANARRATIVES AND COGNITIVE DISSONANCE

The Fourth Industrial Revolution began about the same time that a new term emerged to describe the current era, that of metamodernism. Metamodernism is understood to be a movement beyond the postmodern mode, which in the past was by some called post-postmodern. In their seminal paper, Vermeulen and Van den Akker define metamodernism as follows:

In this essay, we will outline the contours of this discourse by looking at the recent developments in architecture, art, and film. We will call this discourse, oscillating between a modern enthusiasm and a postmodern irony, metamodernism. We argue that metamodernism is most clearly, yet not exclusively, expressed by the neoromantic turn of late associated with the architecture of Herzog & de Meuron, the installations of David Thorpe, the paintings of Kaye Donachie, and the films of Michel Gondry. (Vermeulen and Van den Akker 1).

Metamodernism considers our current era to be an oscillation (from the Greek Metaxis as originally considered by Plato) between characteristics of modernism and postmodernism. This oscillation manifests itself as a shift between the metanarratives of modernism and the skepticism of the postmodern sensibility described by Vermeulen and Van den Akker as follows:

Ontologically, metamodernism oscillates between the modern and the postmodern. It oscillates between a modern enthusiasm and a postmodern irony, between hope and melancholy, between naivety and knowingness, between empathy and apathy, unity and plurality, totality and fragmentation, purity and ambiguity. (Vermeulen and Van den Akker 5-6).
Vermeulen and Van den Akker characterize this oscillation as a “both-and-neither” dynamic. They contend that the epistemology of metamodernism (the as-if) and the ontology of metamodernism (the between) are simultaneously postmodern and modern and neither.

Over the past two hundred-and-thirty-nine years mankind has witnessed the arrival of four Industrial Revolutions. In 1784, the First Industrial Revolution arrived in Britain with the development of mechanical production of products using water and steam power. The Second Industrial Revolution impacted the entire Western world in 1870 with the implementation of mass production with the division of labor and the usage of electrical energy. The year 1969 saw the arrival of the Third Industrial Revolution (3IR), which was based upon the use of electronics, transistors, and information technology. Now just past the turn of the 21st century, the Fourth Industrial Revolution (4IR) has arrived with the use of cybernetic-physical systems, the Internet 2.0, quantum computing, nanotechnology, and applied artificial intelligence.

My artwork, which lines up with metamodernist discourse, does so by focusing on the impact of the technologies and systems of the Fourth Industrial Revolution upon the human psyche and upon human society. In the artwork below, which I created in 2020, I started on this path of developing 4IR impacts upon humanity. This series is labeled with the tongue-in-cheek title of *The Thorny Issues of Quantum Computing Extrude Themselves into Space-time*. (See Figure 1 below.)
In late 2021 through Spring 2022, I developed another series related to the impact of 4IR technology and knowledge upon human beings, which addressed the very perplexing aspects of quantum mechanics theory. I created three acrylic-and-oil on stretched canvas paintings depicting various uncanny counter-intuitive phenomena. The series, recently re-named “The Perplexing Quantum Realities,” appeared in an Armstrong gallery show in Savannah in Fall 2022 as shown in this installation shot (See Figure 2 below.)
The three paintings, arrayed left to right, were individually entitled as shown in the Figures below (See Figures 3, 4, and 5.)

Figure 3: J.R. Lewis, Quantum Theory: Uncertainty Principle, 2021.

Figure 4: J.R. Lewis, Quantum Theory: Indeterminacy Like a Penumbra Across Reality, 2021.
This series revealed some of the mind-bending cognitive apprehensions that human beings have encountered as the 21st century and the Fourth Industrial Revolution unfolds.

Vermeulen and Van den Akker defined the metamodern discourse as focused on works of New Romanticism and the pursuit of meaning within grand narratives, also known as metanarratives, and new mythologies. Artists like Kaye Donachie and Charles Avery exemplify an aspect of this sensibility in their artworks. I have been inspired by the fantasy and abstract/figurative work of these two artists.

Kaye Donachie, a Scottish artist noted for her figure paintings, captures this magical sense of New Romanticism and myth in her apocalyptic paintings of cult-like sects in enigmatic barren places. The oil on canvas painting (See Figure 6 below) from 2004 reveals her metamodernist focus on scenes which drift between dreams and realities, utopian grand narratives that are “both-and-neither.”
Another Scotish artist, Charles Avery, who is known for mystical, utopian pencil drawings from his long-term series in-progress *The Islanders* which he began in 2004, has immersed much of his artistic pursuit in what is considered a grand narrative. His island world of Onomatopoeia evokes a both-and-neither sensibility of East London and the Scotish Herbrides (See Figure 7 below.)
Avery and Donachie’s fantasy and utopian figurative paintings with their abstract contexts are inspirational to me. These two metamodernist artists embody stylistic approaches which are in line with the painting sensibilities which I strive to follow.

In my own artworks I began to pursue New Romanticism and utopian fantasy themes in some of my abstract/figurative paintings as far back as Fall 2020. In a series called “Les Grand Tour d’Europe Tres Bizarre” (“The Grand Tour of Europe, Very Bizarre”), I created several alternate-reality, acrylic-on-paper 30 by 20-inch paintings. One painting entitled “Trolls at Trondheim” (See Figure 8 below) portrays similar sensibilities as the fantasy-like works of Donachie and Avery. Like these two artists, in my series I sought to explore new mythologies.
Figure 8: John R. Lewis, *Trolls at Trondheim*, 2020.

In this painting, the realities of a busy 21st century commercial street in Norway collide with the uncanny aspects of trolls from Norse fairy tales or mythologies. This clash between a Scandinavian contemporary mass transit setting and types of figures, usually portrayed in Norse myths and fairy tales, complicates the work with an oscillation between past and present, fantasy and reality.

Another painting in the series entitled “Ogres at the Eiger” (See Figure 9 Below) provides the unusual perspective on the Swiss railway station in Kleinescheide with ogres nonchalantly roaming the sidewalks of the village, while a raging, gigantic personification of an ogre emerges from the Eiger peak above. As in the previous painting of the series, literal ogres walking among travelers and workers and a phantasmagoric giant emerging from the peak above, clash with the otherwise ordinariness of the scene of a workaday railway station in the Alps.
Figure 9: J.R. Lewis, *Ogres at the Eiger*, 2020.

This painting was another of my explorations of fantasy-like themes with abstract/figurative art, in line with the metamodernist trend of seeking new mythologies in a Neoromantic approach.

Another important metamodernist aspect of my work is the tension created by the contrasting portrayal of opposites which tends to produce a perception of oscillation. The following series entitled “Nanotechnology Without—Nanotechnology Within” which I developed in Fall 2021, consisted of the following two acrylic-and-oil paintings: “Nanotechnology Without: mRNA Vaccine Injected” (See Figure 10 below); “Nanotechnology Within: mRNA Nanoparticle Targets COVID-19” (See Figure 11 below.)
I sought to create a cognitive oscillation between the “macro” and the “micro” views by installing the two paintings adjacent to one another. The intention is to draw the viewer into the familiar of the “macro” and then jolt them into the surrealistic perception of action at the “micro” molecular level.
In his postmodern writings, Jean-Francois Lyotard defined metanarratives in the following way as cited by author Simon Malpas:

As the term implies (the prefix, ‘meta’, denotes something of a higher order—so, for example, in linguistics a metalanguage is a language used to describe the workings of another language), a metanarrative sets out the rules of narratives and language games. This means that the metanarrative organises language games, and determines the success or failure of each statement or language ‘move’ that takes place in them. In *The Postmodern Condition*, Lyotard presents a number of metanarratives, and describes the different ways in which they organise knowledge. (Malpas 24).

According to Malpas, the bases of Modernism for Lyotard were various types of metanarratives, hence Lyotard’s definition of the postmodern as “incredulity toward metanarratives.” Although Lyotard appears to reject the metanarratives of the bygone Modern era, I find some of his definitions for the term remain useful for my own interpretations.

Although philosophers and writers have addressed this concept of metanarratives in various ways over several years, I see metanarratives, closely related to the metamodernist clarification provided by Vermeulen and Van den Akker—a metanarrative is a grand narrative. According to the two authors, artists and viewers are seeking to find existential meaning in new grand narratives, metanarratives, or new mythologies. However, as artists and viewers quest for meaning in metamodernist artworks, another phenomenon is often encountered, namely cognitive dissonance.

In 1956, Leon Festinger, an eminent social psychologist, published his seminal paper *A Theory of Cognitive Dissonance*. Collaborating with a team of colleagues to study a doomsday flying saucer cult called The Seekers, Festinger proposed the notion that people prefer consistency to inconsistency and
embodied it in one of the most controversial but well documented social psychology theories of the 20th century. [The truth was NOT out there but was inside.] Cognitive dissonance is simply a state which people enter when two closely held psychological cognitions (pieces of knowledge or information) are inconsistent with one another and lead to internal conflict, which the human mind tries to reduce.

Cognitive dissonance may be illustrated with an everyday example such as the following from Joel Cooper’s fifty-year reflection on the ever-evolving topic:

A person believes that he should give money to the poor but he passes by an indigent person on the street without contributing money to the man’s cup. These two cognitions are dissonant because not giving money follows from the obverse of his belief. Not giving money follows logically from a belief that one should not contribute to the poor. But in our example, the person held a belief that did not coincide with his behavior. We can say that the two cognitions were inconsistent or dissonant with each other. (Cooper 6).

In this example, Cooper highlighted one of the more complex and conflicting of inconsistent cognitions, a dissonance which intersects with social action or behavior.

In our current pop culture era, art, social media, and mass media entertainment are known to be particularly fertile ground for the appearance of cognitive dissonance. In a thesis completed by Anne-Marie Edmond in November 2002, a compelling case is made for the effects of cognitive dissonance on visitors to an art museum. Edmond states the following from her studies of the visitors’ responses:

Once their discourse was categorized into dissonant and consonant moments, it was further scrutinized to identify visitors' specific meaning. This analysis revealed that the visitors produced more consonance than dissonance in response to both historical art and contemporary art. These
findings indicate that the art form has an impact on the production of cognitive dissonance and consonance. (Edmond 1).

This museum study by Edmond revealed how evocative art can be in the inducement of cognitive dissonance.

Considering Edmond’s findings and my interest in cognitive dissonance influencing artworks, I incorporated the concept of cognitive dissonance into my own creative work in 2022 with a series entitled “The Climate Change Cognitive Dissonance of Others.” The following acrylic and oil painting on canvas is an example of a cognitive dissonance-themed piece. The painting enhanced with digital meta-Artwork—a digital text printed within a meta-Art object—was labeled for display as “Milou’s Lament: The Climate Change Cognitive Dissonance of Others” (See Figure 12 below).

Figure 12: J. R. Lewis, Milou’s Lament: Climate Change Cognitive Dissonance of Others, 2022.
The meta-Art object created in Adobe Illustrator and printed for display was an expositional text about the cognitive dissonance of climate change imposed onto a graphical composition which was printed and then mounted in conjunction with the installation of the painting (See Figure 13 below.)


Using an expressionistic, figurative image and the accompanying metadata I further informed my viewers about the concept of cognitive dissonance in my artworks. The avian researcher looking out at the viewer, draws the audience into her despondency and lament over the plight of the dead seabirds caused by the climate change cognitive dissonance of others elaborated in the meta-Art object. The intention is to project the understanding of this common cognitive dissonance from the subject to the viewer.
A second painting and meta-Art object in the same series was entitled “Climate Change Cognitive Dissonance of Others #2: Arctic Melt” (See Figure 14 and 15 below.)

Figure 14: J.R. Lewis, Climate Change Cognitive Dissonance Meta-Art Object, 2022 after Cooper 6.
The almost-cliché image of a mother polar bear and cub trapped on a melting iceberg on the warming Arctic Sea seeks to draw the viewer into the hopeless peril, which the meta-Art verifies.

In pursuit of metamodernist sensibilities and intentions for my artworks, this concept of cognitive dissonance and artworks has played an ever more important role. In the next chapter I delve more deeply into the historical context of metanarratives, artwork and a related concept called collective cognitive dissonance.
CHAPTER 3

HISTORICAL METANARRATIVES AND COLLECTIVE COGNITIVE DISSONANCE

The current social moment of the 21st century is an era in which the concept of metanarratives has resurfaced in numerous writings about the metamodern discourse. In the following chapter it is critical to first revisit the concept of metanarratives by understanding them in relation to some recent historical examples, and how those historical examples tie into the concepts of cognitive dissonance and more importantly, collective cognitive dissonance. Since I have not pursued any personal artwork directly tied to these past eras, the focus of this chapter will remain on the theoretical and the historical.

Lyotard’s writings on metanarratives mostly focused on the Modern era as the period involved with the Modernism art movement. However, the presence of metanarratives had a broader time horizon than just 1900 through 1960. From my perspective, metanarratives were evident in past historical eras, are evident in the current era, and probably will be in future eras. In looking at the broader definition of the greater Modern era, one can argue it began with the Renaissance in Europe and that it ushered in a new paradigm of power, away from the elite organizations of monarchies and the Church and toward societies with nation-states ruled by prospering middle classes. Within the context of such an extended Modern era, which includes the Enlightenment, new philosophies of authority and aesthetics arose.

In her thesis “The Application of Fairchild’s Model: A Case Study”, Jennifer Flint Eiserman of McGill University argues the following:

With the succession of the middle class, power was no longer a distant, disinterested force. It was located within “the masses.” A dilemma arose.

How could social order be maintained without the domination of the aristocratic classes? Eagleton has argued that a paradigm shift transferred an objective power from a distanced authority to a subjective power, located within the individual. Within this world view, social order
became the responsibility of the individual within a society. The challenge of such a society was to assure itself that individuals took that responsibility for themselves. How was this achieved? I suggest that two disciplines contributed to the internalization of power required by the new states: (1) Science; and (2) Art. (Eiserman 6).

However, this internalization of power by nation-states through Science and Art had some unanticipated applications with the dawn of the 20th century. Namely, that Science and Art could be used by authoritarian nation-states to manipulate cognitive dissonances and normative beliefs of the population and support even immoral, destructive metanarratives.

There is little academic consideration of the new term *collective cognitive dissonance*. The term, coined by the German Green Party politician, Ulf Dunkel, first appeared in 2012 in a court deliberation in Cologne, Germany known as the Circumcision Debate (this case was a non-antisemitic political situation with a special context in German society.) Simply stated, collective cognitive dissonance is cognitive dissonance of a group of people over generations. Dunkel proposed that collective cognitive dissonance had three preconditions: cognitive dissonance of single affected persons; cognitive dissonance of the group which single affected persons with cognitive dissonance belong to; cognitive dissonance of the group, over generations. In Dunkel’s elaborations for the healthcare case the initial understandings of this phenomenon of collective cognitive dissonance may be seen but are not academically elaborated.

A recent article by a law researcher Yadav Milind involving the relationship between cognition biases for humans and AIs has elaborated on this concept of the collective cognitive dissonance as follows:

While Festinger’s theory is limited to the functionality of an individual brain, an extension of his theory is ‘Social Dissonance’. It refers to misplaced norms across a human community/society, also identifiable as collective cognitive dissonance. (Milind 1).
Milind focused on human biases affecting Artificial Intelligence in the article, but he elaborated on the importance of what some researchers call social dissonance and its relevance in human morality studies and cultural relativism.

In academic circles, far more research and publication focused on what may be termed “group cognitive dissonance” rather than social dissonance or collective cognitive dissonance. Matz and Wood focused research on cognitive dissonance in groups during the early 2000’s. In a 2005 paper, the researchers conducted several studies to demonstrate group-induced dissonance. They found the following:

Several modern interpretations of dissonance theory recognize that the source of dissonance or its resolution can reside in social relations. According to Stone and Cooper’s (2001, 2003) self-standards model, dissonance occurs when people evaluate their behavior and find it discrepant from some standard of judgement. This standard can be based on personal considerations and self-expectancies or on social factors such as normative rules and prescriptions used by most people in a culture. (Matz and Wood).

The two authors performed three studies in the early 2000’s which verified their key findings that interpersonal, or group relations, can be both a source and a resolution to dissonance.

Unfortunately, only a brief search through the past century is required to find some of the clearest historical examples which enable an understanding of core arguments of this thesis, as to how artworks could impact and manipulate whole populations. A review of the long-neglected art movements in the USSR and Nazi Germany from 1930 to 1945 reveals important aspects of artwork and its influence on the collective cognitive dissonance of a population over an intergenerational interval. The first example in this historical review is evident in what was called the socialist realism of
the Soviet Union. Clement Greenberg characterized the socialist realism art movement in the Soviet Union (see Figure 16 and Figure 17 below) as *kitsch* and as the antipode of Modernism. However, socialist realism was not just kitsch, nor was it just an artistic alternative to the Modernism art movement. Socialist realism artworks and control of Soviet artists was a planned, multifaceted program of the totalitarian state designed to manipulate the Weltanschauung of multiple generations of Soviet citizens to believe a false version of reality by influencing their collective cognitive dissonance and by reinforcing their belief in the Marxist metanarrative.

![Image](image-url)

Figure 16: Isaak Brodsky, *V.I. Lenin in the Smolny*, 1930, Oil on canvas
Clement Greenberg wrote a seminal work “Avant-Garde and Kitsch” in 1939 in an article in Partisan Review. Greenberg defined kitsch as follows:

True enough—simultaneously with the entrance of the avant-garde, a second new cultural phenomenon appeared in the industrial West: that thing to which the Germans give the wonderful name of Kitsch: popular, commercial art and literature with their chromeotypes, magazine covers, illustrations, ads, slick and pulp fiction, comics, Tin Pan Alley music, tap dancing, Hollywood movies, etc., etc. For some reason this gigantic apparition has always been taken for granted. It is time we looked into its whys and wherefores. (Greenberg 5).

Greenberg elaborated in some detail the characteristics of kitsch in his article, which led to a few of his key socio-political conclusions about Modernism and Socialist Realism. Greenberg saw that Soviet aesthetic kitsch was being used as propaganda for the common man, but he did not realize the deeper
more insidious truth, which social psychologists of the time would have been challenged to describe in other than their own current sociological “Marxist propaganda” terminology.

Boris Groys, art critic and media theorist, speaks of the Stalinist era as an aesthetic reorganization of society that was based in the theory of socialist realism, which was successfully applied to the entire population of the Soviet Union. For Groys it began with the following action toward the artistic community in Soviet Russia:

The avant-garde as an independent entity was forever rendered impossible by the Central Committee decree of April 23, 1932, which disbanded all artistic groups and declared that all Soviet “creative workers” would be organized according to profession in unitary “creative unions” of artists, architects and so on. This party decree, which was intended to put an end to factional strife “on the artistic and cultural front” and subordinate all cultural activity to the party leadership, formally marks the beginning of the new, Stalinist phase in Soviet culture. (Groys 33).

Groys saw this as the point that the private art market was liquidated, and Soviet artists were recruited to fulfill socialist realism orders for the Communist Party. His afterword reflection confirms that the Soviet experiment in creating an “artificial” Communist society instituted the first, but not last, attempt to translate the art of politics into a politics of art: art as a manipulation of the collective cognitive dissonance of a people.

The second example of the manipulation of a population’s collective cognitive dissonance during the period 1930 through 1945 was already cited above: that of Nazi Germany in Hitler’s Third Reich. The heroization of work, and of the worker, in Germany was part of an evolution of philosophy from Wagner through Heidegger to the architects of the Third Reich Nazi metanarrative, a metanarrative which led
Hitler and his inner circle to what they would call the “final solution.” The Nazi concentration camps were designed to use work as the ultimate death punishment for Jews and undesirables, as evidenced by the sign at the entrance of a concentration camp in Poland. Doctor Saul Levine characterized the true intention of this sign as follows in his article on cognitive dissonance in 2021:

A hideous example of deceptive language is the infamous sign at the entrance to Auschwitz Death Camp, where the words that welcomed arriving Jewish and other victims were “Arbeit Macht Frei” (“Work Will Set You Free”). The Nazis treacherously misused soft words to camouflage cruel meanings. (Levine 1).

Levine speaks of the past (and of our current era) in terms of the cognitive dissonance as experiencing true lies and false truths, alluding to the current-era concept of fake news. Describing prejudice as the “servant of self-justification” Tavris and Aronson spoke to this idea of Nazis misusing soft words in their book Mistakes Were Made (but not by me). Tavris and Aronson’s characterization of prejudice was particularly insightful in this description of the very dissonant attitudes of the Nazis toward their Jewish and “undesirable” victims.

The prejudices of the Nazi regime were imbued in Hitler’s self-justifications and led to an unusual manifestation in Nazi German society. The artworks of the Nazi era were exemplified by a focus on the heritage, homeland and on the blood of its people. The totalitarian artworks of the Third Reich include such iconic works as that of Hubert Lanzinger’s “The Standard Bearer” (see Figure 18 below), which portrays Hitler as a mounted, heroic knight bearing the standard of the Third Reich.
Emil Scheibe in his World War II oil on canvas, portrays the Fuehrer as a strong, inspiring military figure out with the common foot soldiers in his “Hitler at the Front” (see Figure 19 below.)

These two totalitarian regimes ruthlessly used science and artwork to reinforce their standards of
judgement and normative rules across a multigenerational population in their respective sovereign states. Specifically, artworks have been shown to be most effective in speaking to the cognition and perceptions of all classes of society, including the less educated and common workers. These enforced standards of communist or fascist judgment made use of the exceptional effectiveness of artworks as a source and manipulator of collective cognitive dissonances across generations and as reinforcement of prevailing metanarratives. In these two historical examples, artworks were shown to be intentionally applied by nation-states to manipulate the collective cognitive dissonance. However, it is my contention that in our current metanarrative-rich era, that unintentional, random drivers of artistic discourse, popular culture and social media conspiracies combine to create ubiquitous metanarratives laden with collective cognitive dissonances, which capture the worldviews of various subpopulations within the internetworked, globalized, 4IR nanotechnology community.
CHAPTER 4

METANARRATIVES OF THE 4IR, ARTWORKS AND ARTIFICIAL INTELLIGENCE

Researchers have been using AIs for the process of analyzing existing artworks and digital artwork collections for over a decade. Over a period of years, since the information age dawned, many artwork collections have been digitized into data repositories for human analysis. However, as we have entered the Fourth Industrial Revolution era those same repositories have been used to program AIs to analyze and categorize artworks and their human artists. Such large data repositories of artworks may be applied to what are called AI deep learning models. The kinds of tasks involved in deep learning processing are multimodal retrieval, automatic classification, object detection and computational aesthetics. Perhaps the most fascinating of these tasks is that of computational aesthetics. Computational aesthetics are challenging because they involve analyzing subjective information about artworks, quantitatively captured from subjective perceptions.

However, a more impactful use of AIs is that of allowing—or designing—AIs to generate their own unique artworks. As far back as 2012, researchers at Rutgers University began to develop algorithms with such computational and analytical capabilities. Initially, an algorithm was developed called a GAN, Generative Adversarial Network, which, once thousands of existing human digital artwork images created between the 15th to the 20th Century were input, allowed an AI to create “enhanced” artwork images. However, in June 2017, a Rutgers researcher, Professor Ahmed Elgammal, proposed in his paper “CAN: Creative Adversarial Networks Generating ‘Art’ by Learning About Styles and Deviating from Style Norms,” and subsequently developed the CAN, or Creative Adversarial Network. A CAN enables an AI to not just copy and elaborate upon existing artworks but rather to create new meaningful and unique artwork imagery. Elgammal ran trials with his assistants and finally coaxed an AI through the CAN and its algorithms to not just emulate, but to create novel artworks.

Many of the digital artworks created by AIs, no matter the approach, are abstract, with some being quite surrealistic and bizarre. Google started an open-source project called Project Magenta several
years ago with a specialized “Brain” Team who concentrated on deep AI learning and focused on developing algorithms for creative artistic generation. One of Google’s engineers, Alexander Mordvintsev, used a convolutional neural network to manipulate patterns in images with an algorithmic pareidolia (perceived images.) This method called Deep Dream allowed AIs to create strange surrealistic abstract artworks, which incorporated existing human artwork with “hallucinogenic” images. This so-called “Deep Dream” effect allowed AIs to produce abstract art such as “Mona Lisa” (see Figure 20 below) where surrealistic and psychedelic imagery was superimposed and enhanced a recast version of the original master’s Mona Lisa.

Figure 20: Deep Dream Mona Lisa.

These pareidolia often take the form of animals, chimera, faces, or out-of-context objects. However, the Deep Dream approach does not yield what one would call original artwork.

In 2019, Professor Elgammal at Rutgers, continued to evolve what he calls AICAN (Artificial Intelligence Creative Algorithmic Network.) This AICAN approach, which required training of the AI with over 80,000 images by over 1,000 human artists, has produced artworks which are more unique. In studies conducted by Elgammal, it was found that humans could not distinguish between the works
created by the AICAN and those created by contemporary human artists. Walter Benjamin’s insights about the Age of Mechanical Reproduction were very prescient as indirect precursors of this 21st century unfolding of AI creative capabilities. As he stated there is a direct correlation between technology and the evolution of Art.

With so many CAN and GAN artworks being developed by AIs, some major issues have arisen. Who gets credit for the AI artworks? Who owns the proceeds of the artwork? An important case which arose in 2019, involved the sale of AI art at Christie’s “Portrait of Edmond Belamy” (see Figure 21 below.)

![Portrait of Edmond Belamy](Image)

Figure 21: *Portrait of Edmond Belamy.*

The piece sold for $432,500. The “signature” of the artist which appears in the lower right is an equation which stands for the algorithm which generated the work: \( \min \max E_x[\log(D(x))] + E_z[\log(1-D(G(z)))]. \)

Two Paris artists, Gauthier Vernier and Pierre Fautrel programmed numerous human portraits into the AI, to train it to create the portrait. Deliberations have continued over the degree of artists’ influence in the development of this unusual AI artwork. In the matter of the “Portrait of Edmond Belamy,” Elgammal has raised the question: at which point does the human artist or programmer yield credit to the AI for the creation? The current trend is for artists and researchers to “train” AIs with enlightened rules to
autonomously create such unique artworks. Another aspect of this trend is the availability to the general public and artists of freemium websites which allow artists to collaborate directly with GAN and CAN AIs and more recently with a new AI algorithm generally known as DALL-E, which can convert natural language into unique human-AI digital images.

In my own artistic explorations during Spring 2022, I utilized a freemium AI enhancement art website called the Night Café Studio to create my first human-AI collaboration project. Working with the GAN AI algorithms, I created two types of digital artworks. The first type involved using the image conversion algorithm. My input to the process was a self-portrait photograph (See Figure 22 below.) Using this photograph, I ran the AI process 5 times, during each run choosing a different artistic style. I chose the artistic styles based on famous artists’ styles in a chronological order, moving through styles Van Gogh, Munch, Matisse, Picasso, to Warhol. I printed the digital outputs inkjet on 20-by-16-inch paper and installed them in a montage arrangement (See Figure 23 below.) Nearby I positioned the complimentary Meta-Art/metadata object which was a 30-by-20 inches acrylic painting with mixed media depicting the VQ GAN algorithmic process (See Figure 24 below.)

Figure 22: J.R. Lewis, Photographic Self-portrait Zero Dark Thirty, 2022.
The second type of human-AI collaborative effort I conducted in 2022, involved using the text-to-image algorithmic method. In this method I chose to input a stanza from one of my own short poems, which I wrote in 2011, entitled *The Tree that Owns Itself*. The text of that stanza is as follows:

In Athens town we come around,
Around to see, a tree,
a tree that owns itself in town,
All legal and downright free.
Once input into the algorithm, I chose a painterly surrealistic style for the AI to use to enhance my words. The result was the digital artwork below (See Figure 25 below.)

![Digital Artwork](image)

**Figure 25: Human-AI Collaboration - The Tree That Owns Itself, 2022.**

Although I did not use this digital artwork in a critique or installation, it started me on a path of creating artworks with AI algorithms using unique texts, an exploration which is continuing.

Another issue which has arisen with AI artworks is artist authenticity and provenance. Recently, a controversy arose over AI artworks which were created to resemble the work of human anonymous street artist Banksy (see Figure 26 below.) These artworks were created by an AI called “GANksy,” whose creator’s website claimed was “born” in September 2020. The creator of GANksy stated that the AI was trained using the images of a “certain street artist” in the UK. Obviously, this raises the question of authenticity and origin and leads to the possibility of legal disputes.
If AIs are allowed to create artworks autonomously, does that imply that their human designers should allow them to enter that most conflicting issue of human cognitive dissonance? Should the cognitive capabilities of AIs be allowed to completely simulate or emulate all the cognitive aspects of the human brain to enhance their creativity? Allowing for cognitive dissonance in any type of AI could be problematic. In an article by Manuel Brenner, the following critical point about beneficial AI development is made:

Lastly, I think the AI community should be mindful of this as well. Our biases show that we gravely overestimate explainability when it comes to our own actions, so we should be aware of potential limitations to the abilities of machines to justify their own behavior. We have a strong desire to have them speak to us and become transparent in their motivations (as Lex Fridman and David Ferrucci go spend some time discussing here), but we should watch out that they don’t become too much like us humans.

After all, we don’t want to have robot overlords that confabulate all day. (Brenner 1).
Brenner explains the need for explainability in humans and their tendency to confabulate over narratives related to truthful accounts.

Beyond the issues of AIs collaborating with humans to create artwork, AIs creating artworks autonomously and the provenance of AI artworks, lies a more formidable aspect of applied Artificial Intelligence. Namely, autonomous actions taken in the real-world by Artificial Intelligences. In my own artworks I started to address this issue with a series I created in 2022, which was about the impact of autonomous AI “killer drones” being used in combat. A digital print text quote mounted on drone-shaped foamboard was displayed with a screen print from a set of HTML code, revealing lines of metadata from a periodical article based on a UN report about autonomous killer drones being used in 2020 to kill military personnel in Libya. The acrylic and oil diptych and accompanying meta-objects were displayed in the installation as shown (See Figure 27 below.)

Figure 27: J.R. Lewis, Installation of Killer Drone Diptych, 2022.
The two acrylic-and-oil paintings making up the diptych were entitled *Yellow Jacket Unmanned Autonomous Attack Drones*, which used an original advanced design I created for a turbofan powered drone based on insectoid sensibilities (see Figure 28 below) and *Enemy Insurgent Casualties Above Alalu River Valley* a scene of near-future human carnage from a hypothetical insurgency conflict in northern Brazil (see Figure 29 below.)

![Figure 28: J. R. Lewis, Yellow Jacket Unmanned Autonomous Attack Drones, 2022.](image)

![Figure 29: J. R. Lewis, Enemy Insurgent Casualties Above Alalu River Valley, 2022.](image)
The purpose of this work is not to undermine the integration efforts of AI into our military operational environment. Rather, the purpose is to highlight a need for understanding the psychological constructs that support our current understanding of human-machine relationships and to generate discussions related to new psychological constructs and theories that lay the foundation in support of how soldiers will learn to make decisions, manage cognitive dissonance, and successfully navigate the effects of change as artificial intelligence fully permeates the military environment. [Scientific evaluation is a start to achieving a more defined and real understanding of how AI can allow humans to distance themselves from the reality of war.] (Murray and Moore 93).

The final sentence cited in italics above was also enlarged, printed, and mounted on the foamboard black silhouette of the killer drone as accompanying Meta-Art.

Two psychologists writing during the middle of the 20\textsuperscript{th} century, Carl Jung, and Victor Frankl, were very prescient in their theoretical work regards man’s need for mythology and man’s search for meaning, respectively. Their prognostications seem to have anticipated the current 4IR era of metamodernism and its unique characteristics. Metamodernist philosophers and theorists contend that in the 4IR social moment human beings are seeking anew for mythologies and grand narratives to believe in. In the next chapter I will delve into the psychological underpinnings of these metamodern tendencies.
CHAPTER 5
SEARCH FOR MEANING OR REDUCTION OF DISSONANCE?

Carl Jung, the famed psychoanalyst, developed his alternate theories of psychoanalysis during the 1930’s and 1940’s, branching away from his mentor Sigmund Freud in the early part of the century. Jung is also noted for his theories on the collective unconscious, archetypes, and mythology. In this paper, with its focus on metamodernism, it is important to review Jung’s focus on the nature of the human mind and mythology. In his 1951 essay “The Psychology of the Child Archetype,” Jung defines mythology as follows:

Myths are original revelations of the preconscious psyche, involuntary statements about unconscious psychic happenings, and anything but allegories of physical processes. Such allegories would be an ideal amusement for an unscientific intellect. Myths, on the contrary, have a vital meaning. Not merely do they represent, they are the psychic life of the primitive tribe, which immediately falls to pieces and decays when it loses its mythological heritage, like a man who has lost his soul. A tribe’s mythology is its living religion, whose loss is always and everywhere, even among the civilized, a moral catastrophe. (Jung 154).

Jung surmised that myths and fantasies (as well as dreams) that are of an impersonal type arise from a collective substratum, or structure, of the human psyche, which he called the collective unconscious. He further elaborated on this theory of the collective unconscious by defining mythological types which he called archetypes. The child archetype was one of several which Jung proposed. Other archetypes commonly defined in this theory are the mother, the anima, the animus, the shadow, and the trickster.

I brought these Jungian archetypes into my own artwork in 2021 and made them part of my 30-hour Review. The acrylic-and-oil series of paintings was entitled The Mind of Man: Jungian Archetypes and Mythology and displayed in an installation (See Figure 30 below.)
The series depicted a small color portrait of Carl Gustav Jung from a 1909 black-and-white photograph, positioned above, with iconographic abstractions of the collective unconscious and expressionist images of the animus, the shadow, and the anima on 40 by 32-inch canvases, installed below the portrait, respectively.

Jung postulated that common mythologems could be observed in cross-cultural studies of individuals and their psyches. A mythologem is a basic theme which is shared by peoples of varying cultures throughout history and throughout the world. Jung described this important aspect of mythology as follows:
But, in point of fact, typical mythologems were observed among individuals to whom all knowledge was absolutely out of the question, and where indirect derivation from religious ideas that might have been known to them, or from popular figures of speech, was impossible. (Jung 152).

Jung concluded that “‘myth-forming’ structural elements must be present in the unconscious psyche” and that these components were mythological motifs which he thought of as primordial images and which he described as his various theoretical archetypes arising within the collective unconscious. The prescient conclusions of Carl Jung on mythology and their postulated impact on contemporary mankind and civilized society, reinforces a cogent understanding of the metamodernist artistic tendency to seek for new mythologies and grand narratives (metanarratives) in the ultra-rational, high technology 21st century.

Doctor Viktor Frankl, because of his interment and subsequent experiences in Nazi concentration camps during World War II, developed his seminal work in psychotherapy known as logotherapy. Frankl proposed that humanity is driven by a search for meaning, in contrast to Freud’s will to pleasure and Adler’s will to power. In his book *Man’s Search for Meaning*, Frankl clarifies the following:

Logotherapy, or as it has been called by some authors, “The Third Viennese School of Psychotherapy,” focuses on the meaning of human existence as well as on man’s search for such a meaning. According to logotherapy, this striving to find a meaning in one’s life is the primary motivational force in man. (Frankl 98-99).

Frankl elaborates that man’s search for meaning is not a secondary rationalization for life, but rather the primary driver of human decisions and behaviors. Frankl stands in the camp of those who believe that mankind is fulfilled by being willing to live or die for ideas and values.
Frankl further clarified that logotherapy theory reveals a human tendency to “existential frustration” which he defines as follows:

Man’s will to meaning can also be frustrated, in which case logotherapy speaks of “existential frustration.” The term “existential” may be used in three ways: to refer to (1) existence itself, i.e., the specifically human mode of being; (2) the meaning of existence; and (3) the striving to find a concrete meaning in personal existence, that is to say, the will to meaning. (Frankl 100-101).

Frankl spoke of the existential vacuum of the twentieth century [and by techno-cultural proximity, the early twenty-first century] as a widely divergent human phenomenon in global society. Frankl saw the cause in a twofold loss: the loss of instinct, which results in mankind having to make choices; and the loss of traditions, leaving mankind without knowing what ought to be done. These losses have produced a human race which is continually facing cognitive dissonances in life, in which there must be selections between moral hierarchies of options to believe in to ameliorate behavior and action.

That mankind has this innate drive for meaning is borne out by continued psychological studies and psychiatric analyses, but it can likewise be seen within the current discourse on metamodernism. In the current Fourth Industrial Revolution era artistic viewers and critics are seeking meaning in new grand mythologies and metanarratives. Severan alludes to this shift in artistic pursuit and discourse in the introductory chapter of his book on metamodernism as follows:

From a politics of centrist neoliberal globalism we have come to witness the rise of ethnocentric autocrats, their foot-soldiers clashing in the streets with progressive social justice warriors of The Woke; from free-market global consumer capitalism: increased protectionism and localism; from mass media to online subgroups and digital
countercultures; and from an art once obsessed with sardonic play and cynical irony we are now seeing a revival of earnestness, idealism, even spirituality. (Severan 1).

Severan couches this revelation about the present in the understanding that global society is “recoiling from the specter of a rootless, generic, world-wide cosmopolitanism.”

Or could it be that something more fundamental is playing upon the psyches of metamodern artistic viewers? There appears to be a collective cognitive dissonance inherent in the artists, artworks and artworld of the early 21st century, that is revealing a collective need for reduction of dissonance in mankind’s global culture. The era of the Fourth Industrial Revolution seems rampant with numerous “dueling metanarratives” for humankind to gravitate towards.
CHAPTER 6 THESIS EXHIBITION

In my thesis exhibition, entitled “Metaxis: Collective Cognitive Dissonance by Any Other Name Would Smell as Sweet” which mostly consists of acrylic, and acrylic-and-oil paintings on canvas, I seek to portray “samplings” of the current metanarratives and their collective cognitive dissonances which dominate humankind’s attention. I believe that unlike the historical, political metanarratives of the Marxist USSR and Hitler’s Nazi Germany, the plethora of drivers of artistic discourse, popular culture and social media conspiracies through overwhelming global information systems and internetworked communications combine to create seemingly ubiquitous metanarratives laden with numerous collective cognitive dissonances. These rampant intentional/unintentional metanarratives capture the worldviews of various large subpopulations (beyond nation-states) within the globalized, 4IR nanotechnology planetary community we inhabit.

Also, in my exhibition, I utilize a concept very much in tune with metamodernist discourse, that is meta-Art. Meta-Art may be thought of as being like metadata: metadata is data about data; meta-Art is art about art. In her seminal article on “Meta-Art” from 1973, Adrian Piper originally defined meta-Art as follows:

By “Meta-Art” I mean the activity of making explicit the thought processes, procedures, and presuppositions of making whatever kind of art we make. (Piper 4).

Piper, in that pre-postmodern era, was very prescient in her extrapolations about the nature of meta-Art and which sets the stage for my understanding of art and art history with the 21st century metamodernist sensibility.

More recent articles have grappled with the meaning and interpretations of the term meta-Art, but from the perspective of the current understandings of metamodernism. In her article, “How Can we
Define the Phenomenon of Meta Art? A Dance Between Philosophy and Art History,” Anika Dacic has updated Piper’s definition as follows:

In our postmodern world or post-postmodern [metamodern] world, as some would argue, the prefix “meta” is added everywhere to mark practically any phenomenon that is self-referential, self-conscious or self-parodying. (Dacic 1-3).

Dacic elaborates further that in the metamodern era, meta-Art relates to all endeavors that concern themselves with practices or procedures inherent in art, intellectually.

Closely related to meta-Art is the information systems concept of metadata. Metadata is defined as “data which is about other data.” Metadata is broken down into three types: descriptive; administrative; and structural. Structural formatting standards, or data formats, direct the technical encoding of the metadata for computer readability and processing. Languages such as Python or HTML are commonly used for formatting data.

HTML or Hypertext Markup Language is used widely in the creation of documents or images which are displayed in web browsers on the Internet. HTML 5, the current coding standard, is complimented with the use of Cascading Style Sheets and tools like JavaScript. The HTML code element \texttt{<meta>} (for metadata) might be used to describe content as in the following example which I developed for my own artwork from a science fictional robotics consideration:

\begin{verbatim}
<html lang="EN" xml:lang = "EN" dir="ltr">
<head>
<title>The Three Laws of Robotics</title>
<meta name="author" content="Dr. Isaac Asimov" />
<meta name="copyright" content ="© 1950, I, Robot"/>
\end{verbatim}
The Three Laws of Robotics: First Law, a robot may not injure a human being or, through inaction, allow a human being to come to harm; Second Law, a robot must obey the orders given it by human beings except where such orders would conflict with the First Law; Third Law, a robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

This metadata for a webpage was graphically reinterpreted as follows into an artistic (meta-Art) printed image that was installed onto an acrylic-on-canvas painting (See Figure 31 below.)

Figure 31: J. R. Lewis, Who’s Next? Acrylic and mixed media on Canvas, 2021.
In his 2021 book *Art as Information Ecology: Artworks, Artworlds, and Complex Systems Aesthetics*, Dr. Jason Hoelscher states the following:

This reverberative interweaving of difference suggests an operative theme of this book, which posits not only an archaeology or genealogy of information, but an ecology of information. That is, the multiscale feedback relations between artist, artwork, artworld, and world constitute art as an *information ecology*, a mesh of differential relations that interoperate between, across, and as the artwork and its artworld. Here artist, work, and world are entangled in their reciprocal potentiation of one another: while the artworld’s distributed field of discourses makes art possible, the artworld itself is made possible by (and as) the aggregate and emergent effects of the artworks it makes possible in the first place. Such reciprocal generativity across multiple scales constitutes the artist/artwork/artworld information-ecologic relation. (Hoelscher 7).

Hoelscher further defines information ecology, as he is using it, as a coevolutionary process—a process which involves a dynamic interoperation of artists, artworks, and artworld which shape one another across multiple levels and multiple orders of resonance.

This interoperation of artists, artworks, artworld and real world, or information ecology, provides for rich and complex feedback loops which by their nature must include an element of information not directly called out by Hoelscher: that of metadata. With the complexities and scales inherent within my artworks of 4IR, I believe there is a place for diminishing the indeterminacy of these technically obtuse artwork subjects and contexts through use of complimentary art objects, abstracted metadata, or meta-Art, which provide for an augmented resolution of the artwork. Hoelscher speaks about this aspect of information ecology as follows:
Generative information, on the other hand, of the type described by Simondon, differs from the regulative in that it is not a difference that emerges from, or enters into, the regulative constraints of a context. Rather, generative information is an operation that reconciles differences in a way that reconfigures, intensifies, or constitutes a context—thereby catalyzing a difference at a higher order of intensity. (Hoelscher 6).

Hoelscher further postulates that regulative information is “analogous to information as being,” while generative information is “analogous to information as becoming.” This generative information, which develops processes of perpetual differentiation—an art as becoming—explains why artwork is difficult to resolve and produces an operation of differencing at higher orders of intensity and complexity. It is my contention that these operations of differencing at higher orders of intensity and complexity contribute to a proliferation of collective cognitive dissonances.

My artworks evoke the impacts of the Fourth Industrial Revolution upon the human psyche and upon human society. My accompanying abstracted metadata and meta-Artworks compliment and supplement my 4IR-related two-dimensional works and give meaning and clarification to content which is otherwise quite complex technologically and scientifically and is on an often-sublime nonhuman scale, either nanometric or cosmodic. These abstracted metadata elements or meta-Artworks may take the form of various mediums from paint to ink illustration to digital prints to installation structures. These complimentary objects have a visual language and aesthetic relationship to the primary artworks.

The inclusion of supplemental meta-Art found objects arranged as “sculptural” addendums in my Thirty-Hour Review were instrumental in building context for the installation of a series of nine 4IR-related paintings, which was entitled “The Entangling Conundrums of the Fourth Industrial Revolution Arise from the Remnants of the Third Industrial Revolution,” 2021 (See Figure 32 below).
Figure 32: J. R. Lewis, *The Entangling Conundrums of the Fourth Industrial Revolution Arise from the Remnants of the Third Industrial Revolution*, 2021.

(These nine artworks have been repurposed and re-incorporated into the thesis show with new meta-Art or metadata.) The original intention was to empower the three-dimensional context of this series with familiar, sentimental, and emotional content by using abandoned personal objects from the Third Industrial Revolution—from the 1980’s through 2000. The discarded and unused hardware, software, business books and corporate training manuals formed an under-layer of physical presence of the bygone era. Cables, cords, and connectors stretched up like vines from the commercial-industrial debris below.

In my thesis exhibition I immediately incorporated the use of meta-Art and metadata objects into what I have entitled *Through The 3IR Entry Passage* (See Figure 33 below) which is the viewer gateway into my gallery exhibition on 4IR-oriented themes.
The Third Industrial Revolution began in 1969 with the arrival of key technologies such as microelectronics, transistors, information technology and the Internet 1.0. This Meta-art/metadata display took the viewer through an abstracted reflection on the decades of the 1970’s, 1980’s and 1990’s with the 3D display of iconic, sentimental, and emotional content which uses abandoned readymade and found objects. The discarded and unused hardware, software, business books, corporate training manuals and various objects of entertainment media form an under-layer of physical presence of the bygone era. “Through the 3IR Entry Passage” is divided into four distinct “canvas partition” areas. Each canvas partition set of readymade and found objects have an association with one of the decades of the 3IR and with either vocational significance or entertainment media significance. These iconic, yet personal, canvas partition areas are described below.

The first canvas partition display on the left (see Figure 34 below) represents the 1970s. In 1975, I joined the Army and was stationed for 3 years in Erlangen, West Germany, near Nuremberg with the First Armored Division. I was in a special program called Stripes-for-skills, where with my master’s
degree in Humanistic Psychology I worked as a drug and alcohol counselor in the Community Drug and Alcohol Assistance Center. It was at the height of the Cold War with the Soviet Union.

Figure 34: J.R. Lewis, *Listening to Radio Bavaria 3 before Leaving for Grafenwohr*, 2023.

The next canvas partition on the right (see Figure 35 below) represents an aspect of mass media in the 1970s. In entertainment media, comic books were exploding as a pop culture phenomenon in the 1970s. Marvel and DC were exploring new worlds with their real-life, angst-ridden superheroes and an ever-growing cast of characters. The 1970s was the foundation for what later came to be known as the Marvel Cinematic Universe in the Fourth IR era.
The next canvas partition on the left (see Figure 36 below) represents corporate work life in the 1980s. In the 1980s, after returning from the service, I changed career directions, got an MBA in Information Systems and entered the corporate world, working for AT&T and IBM. The internet and the World Wide Web were born. Home computers arose along with dial-up modems. Adult workers began playing computer games and remote office work from home expanded new possibilities for business productivity.
The final canvas partition on the right represents typical entertainment leisure in the 1980s (see Figure 37 below.) In entertainment media, VCRs were proliferating along with a surge in science-fiction television and movies. *Blade Runner* and *The Terminator* arose to foreshadow themes which remain relevant to us in the 4IR: rampant nanotechnology and rogue artificial intelligences. For comic relief from such heavy episodes, I found it nice to enjoy the campy science fiction of the UK *Doctor Who* series relaxing at home on a Saturday night after a hard week of tech work.
Figure 37: J.R. Lewis, *Another Saturday Night in the Eighties Watching the 5th Dr. Who, Peter Davison*, 2023.

After considering and moving through the 3IR Entry Passage, the viewer was paused to view what I have entitled *Jung’s Collective Unconscious and Mythology Archetypes Waypoint* (See Figure 38 below.)
In this series a figurative/abstract portrayal of Carl Jung’s psychoanalytic theory of archetypes, which connect humankind to what he called the collective unconscious is evident. In the three acrylic-and-oil on paper or canvas paintings the archetypes of the Animus, The Shadow, and the Anima are seen. The Jungian mythology waypoint directed the viewer to move to their left and sequentially down the installations of painting series and their complimentary meta-Art and metadata objects positioned around the perimeter of the gallery (moving clockwise.)

Next, the viewer passed *Through the Y2K Boundary Layer* (see Figure 39 below) into the 4IR and the rest of the gallery. The viewer first encountered a larger more complex re-work of my previous series about the issues of quantum computing in the 4IR. This new series, is entitled *The Very Thorny Issues of Quantum Supercomputing Extrude Themselves into The Multiverse* (See Figure 40 below.)
Figure 39: J.R. Lewis, *Through the Y2K Boundary Layer*, 2023

Figure 40: J.R. Lewis, *The Very Thorny Issues of Quantum Supercomputing Extrude Themselves into the Multiverse*, 2022-2023.

This series combines realism with the abstract by joining five paintings together in an organic-like semi-3D array. The issues of AI artistic creativity, AI self-awareness and sentience, spooky quantum mechanics theory and applied robotics are joined in the 3D context of thorny branches connecting them to the central abstract painting of a 1000-qubit quantum supercomputer.
In the quantum physics paradigm of current-era physics, the next series embodies the strange, counterintuitive nature of quantum theory at the subatomic particle scale (See Figure 41 below).

Figure 41: J.R. Lewis, *Perplexing Quantum Realities*, 2021 - 2022.

The issues portrayed are: the uncertainty principle, which reveals the both-and-neither aspect of a photon of light as both a particle and a wave; the quantum principle of indeterminacy where particle or electron states can have multiple states of spin along the three axes, X, Y, and Z and +1, -1 or both; and a relatively new discovery of the quantum time crystal, which is believed to be a new state of matter. These three metaphorical works not only line up with the inherent nature of oscillation within the particle physics realm, but they also align with the characteristic of oscillation in metamodern sensibilities.
The next series (See Figure 42 below) portrays some of the overwhelming issues of climate change which exacerbate a global collective cognitive dissonance as clarified by the examples in the accompanying meta-Art/metadata.

![Figure 42: J.R. Lewis, The Climate Change Conundrum, 2022.](image)

The iconic plight of polar bears in the Arctic is portrayed in the first painting, along with a depiction of dying sea birds and a dismayed coastal habitat researcher in the second painting. Explicit examples of climate change cognitive dissonance in accompanying meta-Art/metadata pieces enhance the paintings.

The next series paraphrases a familiar environmentalist slogan from the 1990’s which was “There is NO Planet B.” Elon Musk’s vision, and his company SpaceX’s mission, embodies another viewpoint which is that “There is a Planet B!” The series *The Reach into High Frontier (There is a Planet B!)* (See Figure 43 below) portrays the various elements of Musk’s dreams, realities, and achievements.
Using space beyond Earth orbit for commercial purposes is another grand mythology that some people are holding onto in the 21st century. Elon Musk exemplifies this metanarrative with his project of travelling to Mars and establishing a colony for human life. Images of the early days of SpaceX commercial space travel remind the viewer of the possibilities of success and failure in this endeavor, while an iconic “Mars Vision” portrait of Musk portrays the dream of yearning for ultimate success. A satirical meta-Art object, a hypothetical Person of the Century magazine cover for December 2099 reveals the fulfilled outcome of a 120-plus year-old Musk on Mars.
The next series reveals various aspects of humankind willingly enhancing human capabilities with the 4IR technological capabilities of nanotechnology and AI/robotics (See Figure 44 below).


Various acrylic-and-oil on canvas paintings are accompanied by Meta-Art and metadata objects embedded or externally co-located.

The next series portrays the current (and by implication) the future collaboration between humankind and AIs in creative endeavors such as visual artwork creation. This series (See Figure 45 below) is based upon my own experimentation with online freemium Artificial Intelligence algorithms.
Figure 45: J.R. Lewis, *Human-AI Collaboration*, 2022-23.
The work denotes the process of AI-Human collaboration on the creation of artwork. The work connotes the meaning of human-AI artistic collaboration and its consequences.
CHAPTER 7 CONCLUSION

“Metaxis: Collective Cognitive Dissonance by Any Other Name Would Smell as Sweet,” my thesis exhibition, attempted to capture the aesthetic, symbolic and existential sensibilities of our current era. The 2020’s have dawned not as another “roaring twenties” but perhaps more as “a terrible twenties” with the COVID-19 Pandemic, climate crises, and the largest war in Europe since WWII. Against this backdrop, humankind faces the ever-burgeoning technological progressions inherent in the Fourth Industrial Revolution from quantum time crystals to autonomous military drones to 90-year-old actor William Shatner—Captain Kirk of Star Trek (See Figure 46 below)—going into space via commercial Blue Origin space capsule, during which [he revealed in an interview afterward] Shatner experienced an episode of “orbital” cognitive dissonance in perceiving the blackness of space.

![Figure 46: Kirk-Shatner in Space (Getty Images).](image)

The 2020’s has ushered in a recognized decade of the predominance of cognitive dissonance. In his book, *The 2020’s: A Decade of Cognitive Dissonance* the author David Houle contends the following:

Cognitive Dissonance is a phrase many do not know the definition of, yet most of humanity is now in this state. This book is an attempt to educate about this unmoored feeling of disorientation and to help prepare us all
for learning how to live in it… and create our future within it. Part of successfully adapting to massive change is to have some forethought about it, and what it might mean. (Houle 1 – 3).

Houle by trying to look further into the 21st century than previous futurists, has specified the importance of greater awareness of cognitive dissonance as a unique way of navigating an ever more uncertain future for global society.

Houle further extrapolates:

As we have learned in the last 50 years, science fiction often becomes science fact. This will accelerate in the 2020’s. Hand-held devices, body scanners, brain implants, space travel, driverless vehicles, a dramatically changed definition of the workplace, entirely new business models that integrate the future into past models that work, extending life expectancy extension, genetic enhancement, and a new growing collective consciousness are all things that will make their continued impact in the 2020’s. (Houle 1 – 3).

Current thinking by futurist-oriented thinkers is that the only way for mankind to endure is to face the reality of ubiquitous cognitive dissonances and press through them into new horizons of the human psyche—perhaps with support of our AI creations who are becoming joint stakeholders in our destiny—and a continued pursuit of creativity, art, and imagination, such as that shown in my Human-AI collaboration works below (See Figure 47 and 48.)
Figure 47: J.R. Lewis, Full Poem AI-Enhanced, *The Tree That Owns Itself*, Human Re-interpretation to acrylic-and-oil canvas, diptych 48 by 36 inches, 2022.

As humankind continues the advance into the esoteric quantum mechanical interpretation of the cosmos, it should recall the famous phrase of Albert Einstein: “Imagination is more important than knowledge.” (See Figure 49 below.)

Figure 49: Paul Haisman, Editor, Time Magazine, *Person of the Century*. 
REFERENCES


