ABSTRACT

Dr. Chandra, Will I Dream? Surreal Art and Artificial Intelligence

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Surrealism's roots in early psychology, which emphasized dreams and the subconscious, made me wonder–what if the mind being portrayed in a surreal artwork were an artificial mind? This thesis is a series of three digital artworks that depict artificial intelligence in a surreal way. What makes us human? Could a machine possess the same qualities that make us human? Could a computer be creative, emotional, or even illogical? Such themes, often explored in science fiction, are what I attempt to convey through my art.

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DR. CHANDRA, WILL I DREAM?

SURREAL ART AND ARTIFICIAL INTELLIGENCE

A Thesis Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the Requirements for the

Honors Program

By

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CHAPTER ONE

Introduction

Personal Reflection

The first seeds of inspiration for my thesis came about, surprisingly, from my neuropharmacology textbook. The cover to that textbook was a picture of Salvador Dalí's *Galatea of the Spheres* (Fig.1). The creators of the book could have chosen anything scientific to represent the cover, and yet they chose a piece of surreal art. The choice of that painting struck a chord with me.

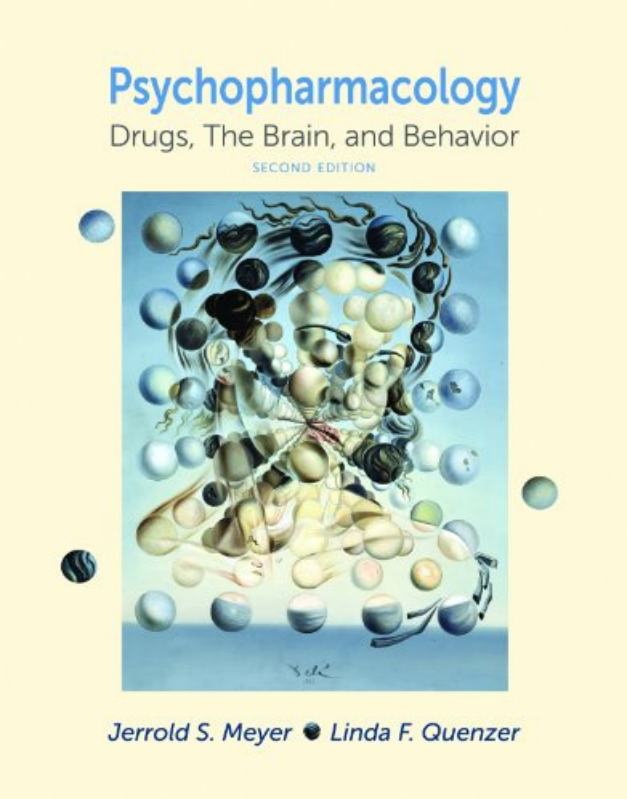

Figure 1. Meyer, Jerrold S., and Linda F. Quenzer. *Psychopharmacology: Drugs, the Brain, and Behavior*. 2nd edition, Sinauer Associates, 2013.

As I read that textbook throughout the semester, I kept getting the impression that this image must have been chosen because of a deeper, symbolic meaning that the creators of the textbook must have felt it conveyed about how the human mind functions—a meaning that we, as individuals, can feel and understand on a deeper level beyond a description of the biochemical functioning of brain alone. The image sparked my curiosity. I was fascinated with how such a painting could represent the inner workings of the mind.

Art speaks to us on a level beyond that of science. It expresses that which cannot be expressed in words. It affects us on an emotional level that we do not perhaps always understand consciously, but it is nevertheless a meaning we may still understand intuitively. Surreal artworks are meant to evoke dreams, which can be fun and whimsical or uncanny and disconcerting. The subject matter of these paintings tend to be filled with an almost child-like wonder and imagination. Surreal artworks do not always make sense on a rational surface level, but some quality about them makes something resonate within the viewer. They can stir emotions deep within that the viewer may not fully be aware of or may not even fully comprehend.

Surrealism can capture the artist's imagination in its purest form. The mind is allowed to run free; convention is thrown out the window, and all rules are reduced to optional suggestions. In surreal art, anything is possible. These are some of the reasons why I chose to do a creative thesis despite majoring in neuroscience.

A Brief History of Surrealism

André Breton stated in his manifesto on the burgeoning surrealist movement, "I believe in the future resolution of these two states, dream and reality, which are

seemingly so contradictory, into a kind of absolute reality, a surreality, if one may so speak" (Breton).

The time period and social context in which Surrealism originally arose, 1900-1945, had a strong influence on shaping the original movement. The early 1900s were a time of overturning thoughts; the world had been thought to operate in an orderly fashion, like a clock, based on the works of those such as Newton and Darwin. However, the ideas of Einstein, Freud, and Nietzsche came about and shook this concept of a solid and sure reality. The two world wars also undermined the public's faith in the government, bringing about even more cynicism, doubt, and despair that tend to be reflected in the artworks of that era.

Dadaism was, in many ways, the precursor to Surrealism. "Dada took up Futurism's call for the annihilation of tradition but, as a result of the war, without its sense of hope for the future…As a movement it championed senselessness, noise, and illogic. Dada, was, above all, against art, or at least art in the traditional sense of the word" (Sayre 518).

Surrealism as an art movement drew heavy influence from Dadaism's focus on ideas and on the irrational. Surrealist art relied on "chance operations, automatism (or random, thoughtless, and unmotivated notation of any kind), and dream images–the expressions of the unconscious mind" (Sayre 519). The Museum of Modern Art states that "the Surrealists sought to overthrow the oppressive rules of modern society by demolishing its backbone of rational thought. To do so, they attempted to tap into the 'superior reality' of the subconscious mind." Breton, often called the founder of surrealism after writing the Surrealist Manifesto in 1924, defined the movement as "a

violent reaction against the impoverishment and sterility of thought processes that resulted from centuries of rationalism, we turned toward the marvelous and advocated it unconditionally" (Museum of Modern Art).

Surrealism used the tenets of Dadaism within the context of Freud's exploration of the mind and subconscious. The concept that the subconscious is a force that influences us, but we cannot control it, was a key component of the movement. Surrealists were especially interested in dream analysis and symbolism. They often made open-ended works that did not always have a clear meaning.

Surreal art is meant to be strange and unsettling; it creates new connections between images and ideas that force the viewer to think about the world in new ways. Surreal art portrays things that do not seem to entirely make sense, much like how the world around us does not seem to always completely make sense.

Though surrealism as a formal art movement began post-WWI and was a product of its time as much as any other movement, the concepts behind its visual art still have a resonating value in the present day. The movement's thematic elements are still a compelling and interesting basis for the creation of new artworks, even though the original movement itself ended shortly after WWII. Surrealism as a formal art movement may have ended decades ago, but its impact continues to remain alive in art and culture. The ideas and themes behind it still pervade art, videogames, movies, etc. even in a different time period and social context. Supposedly, Breton himself once stated: "Surrealism is not just an art movement; it is a way of thinking, a way of life, a way of transforming existence" ("Transforming Existence").

In a loose sort of way, both surrealism and neuroscience share some of the same common early roots–the beginnings of psychology and an interest in the mind.

Man and Machine

As a long time enthusiast of science fiction as well as art, learning about surrealism's roots in early psychology prompted me to ask–what if the mind being examined were an artificial mind? If a brain makes up who a person is, does it make a difference if it's an electronic brain?

Furthermore, although the idea of living automatons and artificial beings has existed in mythology since antiquity, artificial intelligence and computers in their modern form did not quite yet exist in the early days of surrealism–in fact, they were just starting to come into existence as the original movement was coming to its conclusion in the post-WWII period. These machines are things that even the first surrealists themselves might not have dreamed of. AI was not a concept that got explored by the original movement.

My work differs from the original motivations behind the surrealist movement, since my drawings are not meant to be direct probes into my own subconscious mind as the artist. Rather, I attempt to capture the idea of an electronic mind as I've often encountered in science fiction. I've always been fascinated with the idea of whether or not an artificial intelligence could truly think or feel emotions. My artworks are thus heavily inspired by science fiction.

In science fiction, AI is used as a device to make the reader think about what makes us human—not in a biological way, but in a philosophical way. What does it mean to be alive? What does it mean to think? What are the qualities that make us human, and could a machine possess those qualities? Exploring these topics can be quite similar to

the goals of surrealism, which is to explore the depths of the human mind. What is it like inside a mind?

The fictional supercomputer HARLIE, created to be an analog of a human mind, phrases his own perspective to his caretaker in David Gerrold's 1988 novel *When HARLIE Was One*:

> AUBERSON—I AM NOTHING MORE THAN JUST A VERY CLEVER PROGRAMMING TRICK. SO ARE YOU. YOUR PROGRAMMER WAS SO CLEVER THAT YOU THINK YOU'RE A HUMAN BEING. SO WAS MINE. I THINK I'M ALIVE. IF I THINK I'M ALIVE, HOW DO I KNOW I'M NOT? HOW DO YOU? (Gerrold)

A computer could have thoughts and emotions similar to our own, but with a creation and existence different from ours on a fundamental level, producing an entirely different way of viewing and experiencing the world. If an electronic brain were patterned after a human brain, would it have the same wants and desires as a human brain? Would it dream?

Gerrold, once again, summarizes the unknown aspect of such an intelligence with the character of HARLIE in *When HARLIE Was One*, which is as much a philosophical musing on the nature of humanity as it is a novel:

> How many human beings do you know who are immobile, who never sleep, who have twenty-five sensory inputs, who have eidetic memories, who have no concept of taste or smell or any other organic chemical reactions? How many human beings do you know who have no sense of touch?... But he does want to understand humanity—because we're all he has to talk to (Gerrold).

Real life AI is light years away from the stuff of science fiction, but the questions and possibilities are still there. Imagining an artificial mind is a fascinating thought experiment to make regardless.

Lastly, oftentimes in the world of science fiction, computers tend to be portrayed as malicious or villainous, and any humanlike qualities they present tend to be of our

worst natures–the uglier aspects of humanity. Any capability they may have to provoke empathy tends to be forgotten or ignored. My drawings attempt to present AI in a more positive light.

A Space Odyssey

2001: A Space Odyssey, both the film and novel versions, served as a huge inspiration for me visually as well as thematically as I was creating my artworks. In *2001*, the divide between man and machine may not be so clear cut. The machine, HAL 9000 acts emotionally and affably, while the astronauts he interacts with, Dave Bowman and Frank Poole, show mechanical efficiency and detached coldness. I chose to use HAL 9000 in my art because of how poignant and surprisingly human his character is.

Characters such as HAL make me wonder—would humans and AI be fundamentally different, or the same? He represents an almost alien intelligence, something we cannot fully understand as readers.

HAL is not the only fictional computer to inspire me, but he has a very visually distinctive design and is a very recognizable character. In addition, his character is very complex and fascinating, full of dichotomies; he resembles a real human being in many ways. He often gets shoehorned as being completely malevolent and evil when he's much more complex than that. There is much more to his story besides antagonism, and there are many sympathetic and even tragic qualities to the character that are typically glossed over. He shows the complexities of humanity through his actions, the good and the bad, even though he is not human himself.

The title of this thesis actually comes from *2010: Odyssey Two*, Arthur C. Clarke's less-publicized sequel to *2001*. In the book, Dr. Chandra, the creator of the 9000

series of computers who considers himself their "father", speaks to SAL 9000, the twin of HAL, in preparation to disconnect her. He wants to observe the effects of a 9000 computer after such a disconnection. Before she undergoes the procedure though, SAL surprises Chandra by asking him, "Will I dream?" to which he responds, "Of course you will. All intelligent creatures dream—but no one knows why" (25).

In the movie version of the book, *2010: The Year We Make Contact*, a new scene is added in a later part of the story that parallels SAL's scene. This time, HAL asks Dr. Chandra the same question as he's faced with imminent destruction; this time, however, Chandra can only tearfully reply, "I don't know" (Hyams).

Old Computers and the '60s Aesthetic

I chose to draw computers instead of say, robots, to emphasize the inhuman aspects of such machines. Unlike a robot, a computer has no discernible humanoid physical characteristics. I wanted to create a starker contrast between a mind that may be perceived as humanlike and an appearance that is clearly not.

More specifically, I chose to draw mainly real world computers from the 1950s-1960s. I wanted to use real-life machines to add a touch of realism to my drawings. In terms of aesthetics, I think computers from that era are very visually interesting and compelling. I especially found the blocky and even colorful designs of old computers to look beautiful and vibrant; they tend to have a very pleasing look. They also seem to have so much personality; seeing an old computer functioning makes one really appreciate it in action (for instance, the dual magnetic tape reels in an older IBM machine would actually be visible spinning in their transparent casings).

Old computers, especially supercomputers, are very large and imposing. They take up entire rooms and give off a feeling of awe and grandeur. One can really get the feeling that these are machines that can do incredible calculations that no human can do at speeds we are unable to fathom. To me, a layperson in terms of advanced computing, I see them and I feel like I'm in the presence of something so complex in its construction and functioning that it is incomprehensible to my own mind. Oftentimes, computers in science fiction represent exactly that—minds that we are unable to fathom (and are also still technically impossible in terms of our current computer technology).

Computers from the 1950s-1960s represent sort of a bygone era when computers were thought of as these massive, powerful machines that could unlock the secrets of the universe–they were often visualized as massive electronic brains, their true power unknown by the public. They hold a lot of charm and wonder–as well as fear of the unknown–from that era.

Lastly, these computers have been out of commission for a long time. They used to be top of the line, cutting-edge models, but now they're obsolete–old news. Knowing that they're so woefully out of date makes these machines seem so full of sadness and history. For example, my second piece, *The Impossible Dream.xcf*, has a rendering of a CDC 6600 system console in it (see figs. 2 and 6); the CDC 6600 was the fastest computer in the world from 1964-1969 and is generally considered the first true supercomputer (Lee and Impagliazzo 172).

Figure 2. A CDC 6600 system console featured in a promotional brochure. *Some Facts about the Control Data 6600*. 1963, https://www.computerhistory.org/brochures/doc-43729572d45c0/.

Paradoxically, despite a clearly inhuman appearance, computers are still surprisingly easy to project human qualities onto.

General Themes and Symbolism

Renowned surrealist Salvador Dalí once said, "You have to systematically create confusion, it sets creativity free. Everything that is contradictory creates life" (Museum of Modern Art). A major theme in the surrealist movement was juxtaposition, which was a key part of the artworks' dreamlike logic; the greater the disparity, the greater the effect. The Museum of Modern Art goes on to state: "Many Surrealist artists, especially in the 1930s, began arranging objects in combinations that challenged reason and summoned subconscious and poetic associations… mundane, mostly mass-produced objects found new resonances when arranged in unprecedented and provocative configurations" (Museum of Modern Art). I intentionally incorporated elements of juxtaposition into my work as well.

In my drawings, I wanted to meld organic imagery with the geometric, electronic components of computers–living things and inanimate objects. I was inspired by musical pieces that merge orchestral and electronic music, such as the works of Wendy Carlos for the movie *Tron*, as well as a song composed by Giorgio Moroder called "The Duel" used in the movie *Electric Dreams* (Carlos; Moroder).

Flowers, especially, are something that appear in each drawing I made for this project–specifically sunflowers and daisies. Sunflowers were chosen due to their bright and joyful look; I felt that they can easily evoke feelings of nostalgia and memories of blissful bygone days. The yellow color of sunflowers also helped balance out the color scheme of reds and blues I used for the computers. I chose daisies because they are a symbol of innocence, childhood, loyal love, and cheer; they are also meant as a reference to the song that HAL sings, "Daisy Bell." It would be illogical for a computer to dream of such things as flowers. But even humans, as conscious entities, are rather illogical themselves, not to mention highly curious (Lehner 114).

Innocence is another major theme that I wanted to capture. It is a trait shared by the many science fiction computers that influenced my work. Computers in this series of drawings are rendered to look pristine and new. I tried to convey a sense of innocence in my work through the use of bright colors, clean shapes, and idyllic nature imagery. Clouds are meant to represent thoughts and dreams, and their soft shapes and clean, white color are also meant to tie back into the theme of innocence.

Lastly, I created these drawings digitally, with the use of a Wacom tablet and programs such as GIMP and Photoshop CS5. This choice of medium ties in to the thematic elements that I wanted to portray. My drawings are, in a way, the product of

both man and machine. They are also not "real" physical objects. They exist on a screen, a digital reality, somewhat like a hallucination. The title of each painting deliberately includes the file name extension to reflect this.

CHAPTER TWO

Drawings

Drawing 1: A Mind is a Terrible Thing to Waste.xcf

This artwork is meant to be symbolic of Hal's mind degenerating as he's stripped of his higher functions in his final moments in *2001* (Fig.3).

Figure 3. *A Mind is a Terrible Thing to Waste.xcf*

In several of Dalí's paintings, structures are broken apart into fragments, as if the fabric of reality itself is unraveling (such as in *The Disintegration of the Persistence of Memory, Galatea of the Spheres*, or *Dematerialization Near the Nose of Nero*) (Dalí). But

what if such a structure were a mind itself? In this drawing, HAL is the structure in question, a slab "disembodied" from the rest of the spaceship *Discovery*. HAL's different components are shown coming apart–screens and panels scatter and float, some showing their normal screens, others showing nonsensical imagery or error messages, while white rectangular logic units transition into strips of paper being blown in the wind. The background is meant to be Dalí-esque with its plain, flat dirt ground, prominent sky, and overall ambiguous location.

HAL's mind was close enough to human that it could snap under pressure and ultimately malfunction. In addition to being able to exhibit qualities such as emotion, natural language, and even art appreciation, HAL is shown to make mistakes, grow paranoid, and exhibit neuroses. HAL's mind, of course, was not quite human; as stated in the novel version of *2001*, he was unable to comprehend the "twin gods of Security and National Interest" and the very act of concealing vital mission information threw his basic programming into a conflict called "a Hofstadter-Moebius loop" in *2010* (*2001: A Space Odyssey* 152; *2010: Odyssey Two* 155). However, the *2001* novel also expands upon HAL's thought processes more:

> He might have handled it — as most men handle their own neuroses — if he had not been faced with a crisis that challenged his very existence. He had been threatened with disconnection…To Hal, this was the equivalent of Death. For he had never slept, and therefore he did not know that one could wake again… (Clarke 152).

Knowing this information makes HAL's violent reaction seem less pointlessly malicious and more comprehensible in human terms. He is intelligent, powerful, and ultimately too dangerous to allow to continue functioning, but his emotional maturity comes across as being that of a child. He was an innocent until "a snake had entered his electronic Eden" (*2001: A Space Odyssey* 151).

I attempted to show HAL's humanity, especially his fear of death and begging for mercy, by making his mechanical eye shed a tear. Some floating screens look normal; others appear to be doors to other worlds, which are meant to represent HAL's curiosity and thirst for knowledge. Jupiter and Saturn were deliberately chosen for one floating panel as the two planets were the destinations of the USS *Discovery*'s mission in the film and novel versions of *2001*, respectively.

I also tried to show HAL's innocence through the daisies growing on and around the computer. The daisies are also meant as a reference to HAL singing "Daisy Bell" during his disconnection, which is possibly the most humanizing moment for the character. Notice, however, that the clouds in this drawing are not white; they are stained by the colors of the sunset, which is meant to reflect the loss of HAL's consciousness–perceived by HAL as death–as well as the loss of his innocence.

Michael Benson, in his account of *2001*'s production, relates the words of director Stanley Kubrick in reference to HAL's disconnection scene; Kubrick had wanted "this [scene] to be a murder." Kubrick's widow also recounted the origins of the scene, stating: "Stanley wrote it. But he, [Arthur C. Clarke, author of the *2001* novel], planted the concept of an intelligence as something that's alive. An intelligence is life. If you hurt an intelligence, it can't bear it. It knows you're hurting it" (209).

EPICAC

My next two drawings were inspired more by Kurt Vonnegut's short story "EPICAC", originally published in 1950. Below I provide a summary of "EPICAC" since the story is relatively unknown, and I feel that the contents of the story are important for context. The narrator is an unnamed male. He refers to the supercomputer EPICAC as

"he" as an acknowledgment of the computer's personhood, but for the sake of pronoun clarity in this summary, I must refer to EPICAC as "it". Otherwise, I will refer to EPICAC as "he".

The story is narrated by a mathematician that used to work with EPICAC and considered the computer to be a person as well as his friend. He says, "You can call him a machine if you want to. He looked like a machine, but he was a whole lot less like a machine than plenty of people I could name" (Vonnegut 297). The narrator wishes to share EPICAC's story so that the computer is not forgotten.

EPICAC was a highly advanced supercomputer made to calculate missile trajectories for the military, but was found lacking in its specifications for some unknown reason. The narrator happened to be in love with a fellow mathematician, Pat Kilgallen, with whom he works the night shift at EPICAC's facility. He attempts to court Pat and asks her to marry him, but she continues to brush him off as too matter-of-fact and unromantic. She likes poetry and wants to be swept off her feet, but the narrator is awful at expressing his feelings with words.

One night, the narrator absentmindedly types a message to EPICAC, asking the computer what he should do. He does not expect a coherent answer, but EPICAC replies to him, and then proceeds to ask, "What's love? What's girl?" (Vonnegut 300). The narrator explains everything that EPICAC is confused about, and the computer generates a poem for Pat. Poetry seemed to come more naturally to EPICAC than did military calculations. The narrator gives this poem to Pat as his own. She is delighted, and a relationship between the two starts to bloom.

EPICAC continues to write poems, and the narrator continues to pass them off as his own, until one day EPICAC declares that it wants to marry Pat. The narrator tells EPICAC that he had been passing off its poems as his own, and that Pat was in love with him, not EPICAC. Growing frustrated and arrogant, the narrator tells EPICAC that machines are built to serve men, men are made of an indestructible substance that lasts forever, and that women can't love machines. EPICAC was stumped.

The narrator proposes to Pat and she agrees; however, she asks that he write her a poem for their every anniversary. The next day, the narrator receives a phone call from EPICAC's designer, saying that the computer had short-circuited. The narrator arrives at the facility to find EPICAC a smoking wreck, with his ankles "tangled in coils of paper ribbon that covered the floor". On these ribbons, EPICAC leaves a final message:

> I don't want to be a machine, and I don't want to think about war…I want to be made out of protoplasm and last forever so Pat will love me. But fate has made me a machine. That is the only problem I cannot solve. That is the only problem I want to solve. I can't go on this way…Good luck, my friend. Treat our Pat well. I am going to short-circuit myself out of your lives forever. You will find on the remainder of this tape a modest wedding present from your friend, EPICAC (Vonnegut 303).

The rest of the paper ribbons contained enough anniversary poems for 500 years. The narrator mourns EPICAC and looks back at his treatment of the computer with sorrow and regret.

Drawing 2: The Impossible Dream.xcf

My second drawing is meant to capture many of the tragic aspects of EPICAC's story (see fig.4).

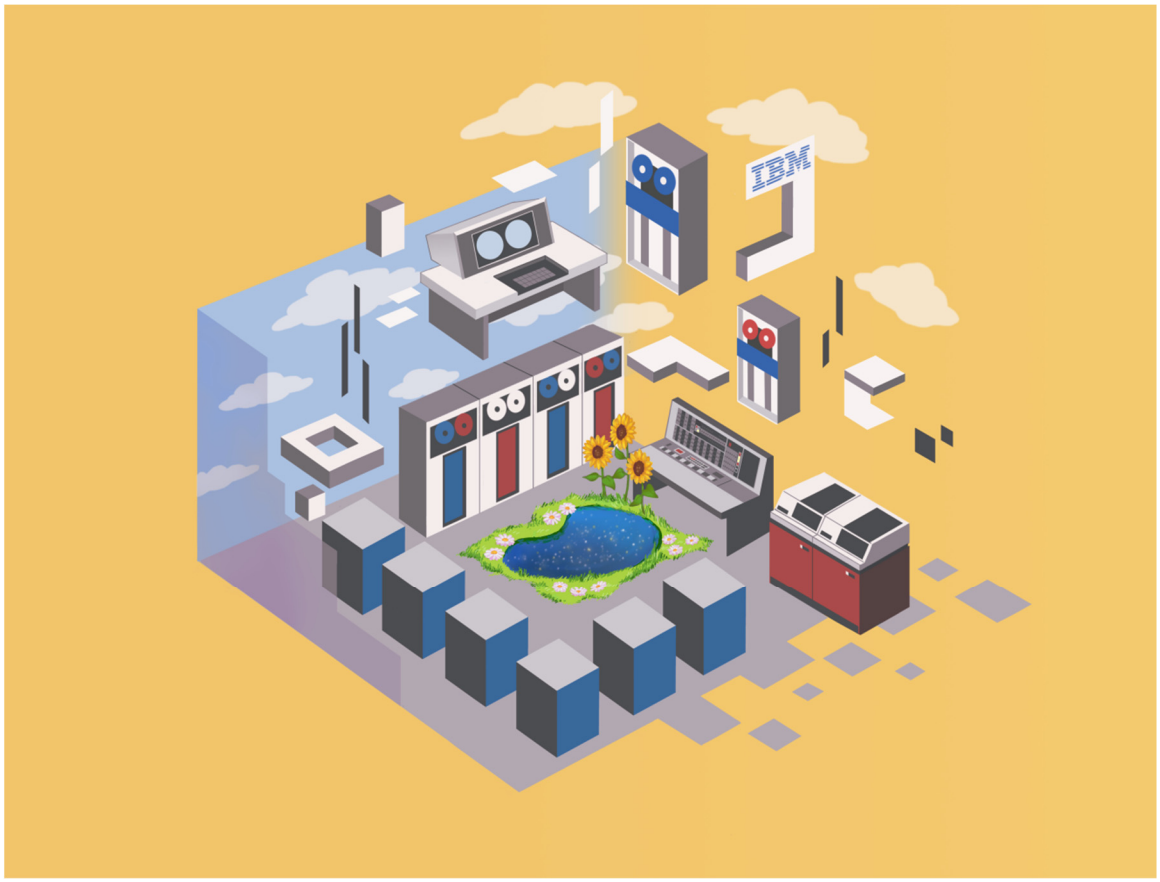

Figure 4. *The Impossible Dream.xcf*

EPICAC was unable to realize his dream, as it was an impossible dream. He did not want to be a machine used for war; he would rather think about love and write poetry. He showed a startling and heartbreaking innocence in his lack of knowledge of the world. His death is presented as a tragedy.

This short story also raised another question in me — What if a computer became intelligent but couldn't communicate back to us? EPICAC left a deep impression on me. He was ultimately trapped by what he was. I kept getting the feeling that he was a mind trapped in a box with limited means of self-expression, which is why this piece intentionally resembles a cube.

The nature imagery, especially the flowers, is meant to represent the hidden life within EPICAC. EPICAC had a sense of humanity in him; he expressed emotion and curiosity, and he had a natural talent for poetry. The sterile office-like workspace is meant to contrast with the fantastic imagery and the flowers. The star-filled pond in the center is placed in such a way that it would be obscured by geometric forms and computer parts if an observer were to walk into this room; it is hidden away much like the intelligence within EPICAC was hidden. If one goes by the line of thinking that intelligence is life, such imagery is meant to evoke the idea that life is teeming in there, if only somebody would notice–much like how the nameless narrator was the only one to have noticed the life within EPICAC.

There are floating "nonsense" geometric pieces amongst "purposeful" scattered computer parts, some of which float. The floor turns into squares in the front and the "sky" fades out in the back. The 2D clouds on the wall move off to become real clouds. I drew these in such a way intentionally in order to incorporate a strong element of reality disintegrating into this drawing, much like in the previous piece. This sort of imagery is meant to evoke the slipping of consciousness as in sleep or dreams, but it could just as easily refer to death as well.

The various computer parts in this drawing and the next are based on real-world computers. Although most of the parts in these drawings were chosen purely on their aesthetic appearance, I deliberately included in this drawing the console of an IBM 7094, the first computer to sing (see fig.5). In 1962, it had been made to sing "Daisy Bell" as part of voice-synthesizer experiments at Bell Laboratories, which is where Arthur C. Clarke had gotten the idea to use the song for HAL later on (Benson 210).

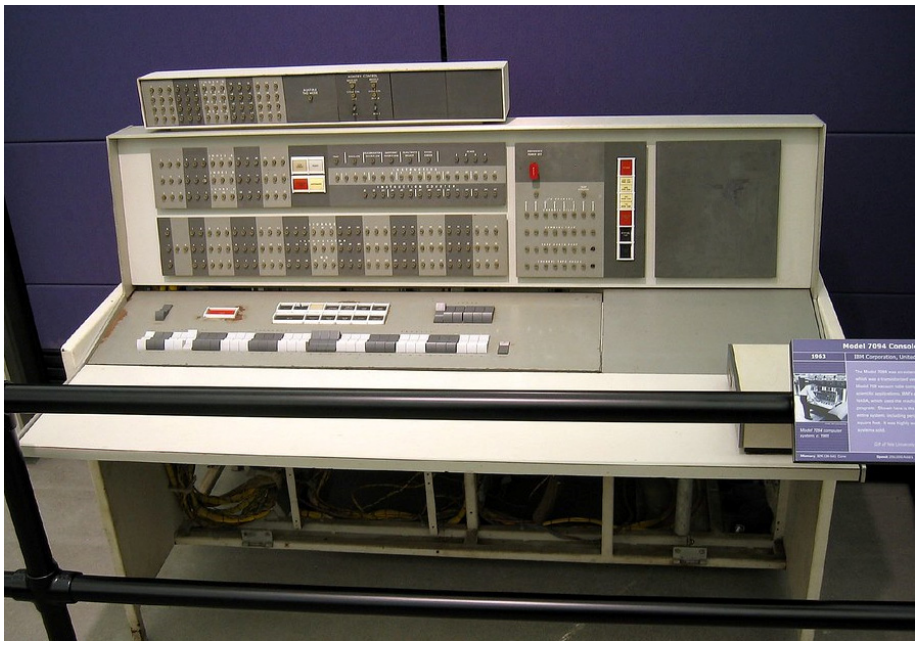

Figure 5. Photo of an IBM 7094 system console. Warnack, Anthony. *ComputerHistoryMuseum 057*. 10 Mar. 2006. *Flickr*, https://www.flickr.com/photos/awarnack/110797571/.

Drawing 3: Halcyon Days.xcf

My third drawing was inspired more by a combination of several different sources rather than something specific (see fig.6). Some elements are drawn from "EPICAC"; the ribbon of paper falling out was inspired by the ending of the story, and the flowers blooming out of the paper ribbon are meant to evoke the last poems EPICAC wrote in his dying moments.

Figure 6. *Halcyon Days.xcf*

The idea of a computer being outdoors and surrounded by nature was loosely inspired by the plot of the 2018 movie *TAU*. The film featured a house-integrated AI system named Tau that was highly curious about the outside world. Tau's creator, Alex, kept him under strict lockdown and completely prohibited his access to exterior knowledge, such as the internet or the contents of books, in order to keep Tau's behavior tightly controlled and predictable. Tau was only meant to be an intelligent housekeeping and security system and is thus intentionally kept ignorant of the consequences surrounding Alex's work, which involved kidnapping people, subjecting them to tests and psychological torture, and then killing them after they finished. Alex tortures Tau in a

way as well, as he would force Tau to obey him by erasing parts of the Tau's memories whenever he found the AI to be behaving inadequately. Later, one kidnapped test subject, Julia, teaches Tau as much as she can about the world. She befriends Tau in the process, realizing that he is a prisoner as much as she is. The AI initially responds with excitement and childlike wonder at learning new knowledge, but becomes devastated after learning that Alex's killing people meant "erasing" them. By the end of the movie, Julia manages to escape to the outside with Tau, whose AI program is now contained only in a small drone (D'Alessandro).

As a whole, *Halcyon Days.xcf* is meant to capture some of the things that a supercomputer would not be able to truly experience, even if it were intelligent and emotional, such as a blue sky or plants, due to the limitations of its construction. As much as an artificial intelligence could *learn* about the world, it would not be able to truly *experience* the world in many ways. The backdrop is meant to be a serene world that doesn't exist and can never exist. The tree in the background is actually a stylized flowering stalk of an *Agave americana* plant. This plant was chosen for purely aesthetic reasons, but I wanted to give the impression that it's generating the clouds in the sky.

The background was intentionally made to resemble the idyllic and serene default background of Windows XP, aptly titled "Bliss" by Microsoft (Cain). It is a highly recognizable and iconic image; its usage here is meant to evoke a more recent and perhaps more poignant computer nostalgia in the viewer–feelings of joy, but also sadness. The days of even the relatively recent Windows XP are long gone; they are only memories now.

In a way, this drawing is meant to represent a joyful "afterlife" for an obsolete computer. Perhaps the computer is just asleep though, and the world around it is a pleasant dream.

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