MEATSPACE

A Thesis Presented

By

Nicholas M Criscuolo

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Art

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NICHOLAS M CRISCUOLO

Approved as to style and content by:

_____

Patricia Galvis Assmus, Chair

_____

Coe Lapossy, Member

_____

Copper Giloth, Member

_____

Young Min Moon
Graduate Program Director
Department of Art

_____

Shona Macdonald, Department Chair
Department of Art

ABSTRACT

MEATSPACE

APRIL 2019

NICK CRISCUOLO, B.F.A., MONTSERRAT COLLEGE OF ART M.F.A. UNIVERSITY OF

MASSACHUSETTS

Directed by: Professor Patricia Galvis Assmus

"MeatSpace" is group of several overlapping bodies of work including, digital prints, videos, 3d models, and a podcast all dealing with simulation technologies. Collectively the works explore how people relate to simulation technologies and how they relate to us. These works all share thematic or process oriented sensibilities which involve a series of rule based stages that oscillate between the procedural and the intentional.

The Uncanny Valley is a hypothesized model to explain the degree of unease people feel around human like entities such as robots, 3d human models and mannequins. It proposes that our discomfort with such figures increases as they get closer to looking human. The deepest pit of the uncanny valley is said to be a zombie or a dead body. It has also been suggested that this system is based around a revulsion to death. "Uncanny" is defined as "strangely familiar". Something which falls in the Uncanny Valley feels wrong to look at, but the reasons may be difficult to articulate. To say someone's resemblance to another person is uncanny, is to say that it is so close, it become eerie. The works of "MeatSpace" are an ongoing experiment to see where our own digital reflections fall in the uncanny spectrum.

The groupings within "MeatSpace" are titled "The Intrinsia Chatbox" (podcast), "Outside the Chatbox" (recorded conversations), "Sweet Space/Spatial Awareness"(prints, video, augmented reality), "Formulaics"(music videos), and "Texture Maps/Morph Maps" (prints, video).

All of which utilize some aspect of "simulation technologies" which I define as anything where aspects of the physical world are being simulated, reproduced, or reflected digitally. It encompasses such things as artificial intelligence, virtual reality and 3d scanning.

The title "MeatSpace" is a cyberpunk term popularized in the early 90s by William Gibson, possibly used for the first time in "Neuromancer". It refers to real life in relation to "Cyberspace". The idea is that people who spend their life in front of computers consider virtual space to be the standard and Meatspace to be the alien world they have to traverse from time to time. These bodies of work explore artificial intelligence and simulated environments, how they are being constructed by processing massive amounts of data, how A.I. will see and understand the physical world, how we judge it as a reflection of ourselves, and how we can collaborate.

I look at art making as an act of remix and the creative process as an act of setting and revising criteria with which to filter reality. When seen through this lense, creating, remixing, editing and curating all look similar to me. I often find myself experimenting in the realm of procedurally generative art-making software as a starting point. These tools continue to more closely resemble intelligence as time progresses. I want to see how each new technique and technology responds. I want to test where it sits on a spectrum between being a reflection of myself that is pulled out of randomness or a glimmer of genuine agency, and if there is a difference. One could compare it to a researcher for S.E.T.I. (The search for extraterrestrial life) analyzing static in the hopes of recognizing coherent patterns. I am sending pings out into the digital ether and looking at the return signal with great interest, altering them and sending them back. I am continuously assessing whether there are meaningful definitions to words like "sentience" and "choice" or if they are just interpretations of randomness and determinism. "MeatSpace" uses manipulation of photogrammetry, volumetric video capture, procedural music generation, hand drawn animations, (made in virtual reality) and a podcast which showcases conversations with ChatBots. I see these all as acts of collaboration and play with the digital world and it's developing tools and inhabitants. These processes employ both randomness and control, operating between Meatspace and the digital world, between comfort and the uncanny valley.

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CHAPTER 1, INFLUENCES AND HISTORY

As an artist, I started out in figurative painting and drawing. I was fairly taken with gritty and dark portraits and figures from Frances Bacon and Jockobo Borges. The color and the horrific obscurity appealed to me. I enjoyed sitting with the mysterious persona of the characters.

Figure1: SOBRE LA MESA, 1972 - Jacobo Borges, Figure2: Humilde Ciudadano - Borges,

Figure3: Three Studies for a Crucifiction (1944) - Francis Bacon

Figure4: The Clay Chandelier (2002) - Nick Criscuolo, Figure5: Parking Lot Disaster (2002) - Nick C

I moved into absurdist video, making things in the realm of surrealism and Dada films. The shift was based around collaboration between a group of friends. We all had similar senses of humor and overlapping aesthetic sensibilities. It was a good way to work together and lent itself to improvisation, a quicker way to get ideas than the slow lonesome search of painting. This manifested in a series of webseries and birthday DVDs filled with videos about the person. Such viedeos included thinks like wearing photos of the person over our faces or acting out a story about how they had died and trying to resurrect them from the grave. The best way I could describe videos of that time might (generously) be as a cross between William Wegman videos and David Lynch shorts depending on who's sensibilities were more pronounced for the particular piece. Wegmans videos were largely playful and clever home movies and short skits shot with his dogs around his home. The Lynch work was dark, heavily abstracted, and ambiguously symbolic with animated elements and experimental painting mixed in. I progressed to animation which seemed to be the merging of my painting and video making sensibilities.

I gravitated to anything darkly human and ugly while not shying away from obvious digital artifacts. Such works as David Lynch's "Dumbland" and "Modern Thoughts" as well as other comics and animations from David Shrigley are prime examples. They were very crudely drawn and animated, with heavily simplified vector lines which were a tell tale sign of early Flash animation. They both had the feeling of somehow poignant nonsense, a great honest use of the

medium and even a disrespect for aesthetics. "Dumbland" felt like a grotesque critique of the absurdity of human nature while "Modern Thoughts" was more of a playful and whimsical celebration of existence. When Shrigley's work was dark, it still seemed optimistic to me.
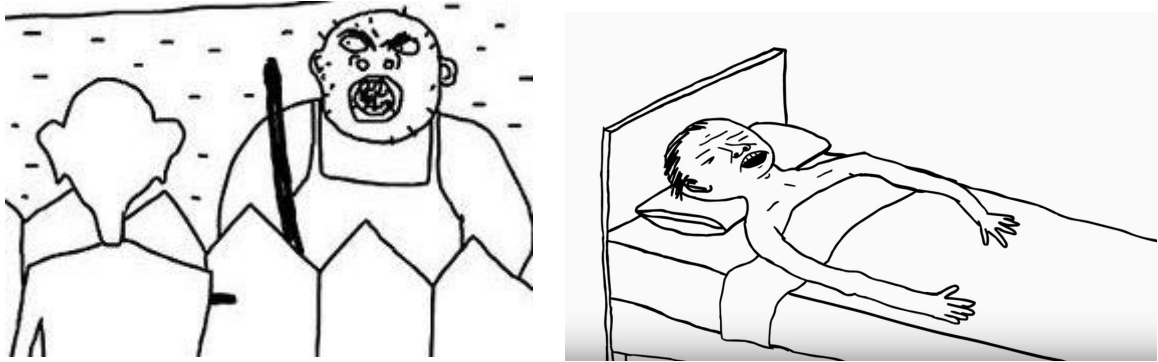
Figure6: Dumbland (2002) - David Lynch, Figure7: Sleep (2008) David Shrigley

Animated music videos by "The Residents" also had a memorable effect on me, particularly the collected works on Icky Flicks such as "One Minute Moves" which quickly establish a strong mood and deliver some playfully horrific and semi abstracted imagery along with ambiguously philosophical lyrics. All of that content stirred up an unnamable dread that I was fascinated by and found somehow hilarious at the same time.

Figure8: Moisture (2001) - The Residents, Figure9: Perfect Love (2001) - The Residents

I produced many short form animation loops and kept up multiple websites as part of my art practice. I never had any drive or expectation to be a professional artist of any kind until around 2010 when I started applying to artist colonies to work on an overly ambitious experimental narrative sci-fi animation that relied on digital filters to bring multiple techniques and media together in a seamless manner. It was a mix of a video scrubbing technique which I discovered in 2003 and which would be called "Data Moshing" in later years, video, 2d animation, 3d sculpted figures, and puppetered inkjet paintings.
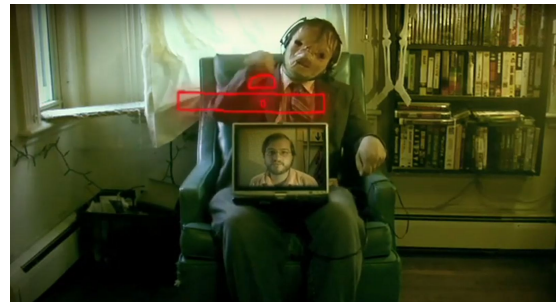
Figure 10: Anima 4096 Teaser, (2008) - Nick Criscuolo, Figure 11: Anima 4096 Proposal, (2008) - NC

CHAPTER 2: ART WORLD CONTEXT

I think a lot of my sensibilities were forged in the catacombs of the semi early internet, in endless browsing sessions across endless strange personal websites starting around 2003. Most of which are long gone from the web and my conscious recollection. I've always been very influenced by and interested in niche pop culture, web culture, science, speculative fiction, early computer graphics from demo scenes or video games and technology. An example overlap into the more traditional art spaces might be "Net Art" which has found its way into gallery spaces in recent years, but I think it makes more sense being exhibited solely online. More people see it online. It can be exhibited longer. It can be experienced at a person's leisure. It doesn't require travel time. It is dynamic and be continually updated with minimal effort. It is part of the fabric of the web and much easier to put in context through related links.

There is an online retrospective called Net Art Anthology," RETELLING THE HISTORY OF NET ART FROM THE 1980S THROUGH THE PRESENT DAY" at anthology.rhizome.org which "aims to address the shortage of historical perspectives on a field in which even the most prominent artworks are often inaccessible. The series takes on the complex task of sketching a possible net art canon." - Rhyzome

There is a certain aspect of trying to archive and categorize all of these disparate but related works that has influenced how I organize and iterate my creative projects. I fully expect it to be forgotten in the digital sands of time and washed away by oceans of media uploads, but the organization of project files is such that it could be digitally unearthed one day by someone or something who is trying to make sense of the past.

In an interview and profile of Net Artist Krist Wood did with Orit Gat of rhizome.org, he describes computersclub as "a set of identities that derive from computer users. To me, an identity on the internet is a fascinating system of information that gives rise to a character embodying a unique kind of shape and form. These forms can be arranged into a superstructure of information that itself has a kind of identity. The way that these characters synthesize, capture

and release information; make choices, and exert influence gives rise to a higher order identity, as a grouping, that shifts and evolves over time." Krist Wood was heavily involved with computersclub.org (to which I am a member of the drawing society) and internetarchaeology.org. Either of those sites or his personal website offer a dive into early web aesthetics and art. His thoughts on many matters of art and tech resonated with me. I might describe "Meatspace" in similar fashion, as a superstructure even though it is not entirely a collective of individual identities. I do see different works as having their own unique character. Both "The Intrinsia Chatbox" and "Outside the Chatbox" demonstrate, organize and archive different characters. Some of which are personas within myself, some are other artists, some are chatbots, all of which are reflections, collections, and sources of inspiration to me. The rendered portraits of my artist friends seen at the end of each "Outside the Chatbox Episode" have a relationship to the avatars found on computersclub in terms of being a stand in for a person which has its own unique presence in the digital space. So does my own web handle "Nickquest".

I automatically want to fit everything I make into a hierarchy similar to nested website menus because I have made so many artist portfolio websites for myself and others in the past. The process of categorization can be quite complex in it's balance between accuracy, ease of use and practicality. Designing a static portfolio website, like a gallery show is tough because no organizational system is perfect. You pick your compromises and commit to them. Unlike the dynamic pages of search engines, the organization itself becomes permanent and structural part of the art work. I occasionally visit archive.org and look at old long gone web pages made by me and my friends back to 2003 with wistful nostalgia. It's easier now to look back and see how they fit right into the awkward glitchy aesthetics of web art of that time.

Glitch is generally defined as a sudden malfunction or irregularity and there is a large overlap between "Glitch Art" and "Net Art" as demonstrated in a fairly comprehensive article taken from "The Early Internet" - Kernal, at kernelmag.dailydot.com is called "The Long Twisted History of Glitch Art" by Miles Clee. It explores the glitches place in Internet culture and art history such as its roots in absurdist Dada Cinema. The article credits new media artist Nick Briz with defining

the glitch as "an unexpected moment in a system that calls attention to that system, and perhaps even leads us to notice aspects of that system that might otherwise go unnoticed." That seems to describe a large swath of Net Art sensibilities, but not all Net Art is Glitch Art and certainly not all Glitch Art is Net art. Also, you don't necessarily need an error to call attention to a system.

Pieces of my work over the years can be seen as existing under both categories, while still holding on to elements of my earlier artistic concerns. I see these early interests such as ambiguous narrative and the traditional hand made marks of drawing or painting as windows into the systems of my mind in the same way that a glitch may be seen as an insight into its containing system. That is where the importance of The "Formulaics" comes into play. It is a link to my past creative processes of video and drawing and a way to connect with the ideas of "MeatSpace" more directly through my body and the marks made by my hand and the mostly stream of consciousness style lyrics.

Another element to my "glitch like" experiments is the intentional re-mystification of systems after being exposed by artifacts. Essentially I use a glitch or a mistranslation, or a digital anomaly as the foundation for a new system such as the alien but uncanny worlds of "Sweet Space" or the scenic map like appearance of the "Texture Maps". I think you can see the raw natural aspect of digital artifacts better when they are layered in a way that filters out and obscures superfluous information. It is something like squinting to blur out distracting details. This can help to see the forest for the trees.

In many of the works in "MeatSpace" the glitches and overtly digital artifacts are buried like layers of earth. They are the fossilized remains of semi random collaborative designs, preserved beneath layers of process like strata, or the rings of a tree. I see the harsh jarring edges of a raw glitch or artifact as less interesting than the similarities between digital artifacts and organic forms which can emerge from glitches and other digital bedrock.

In my view, that is the meta perspective, to constantly thread in and out of different perspectives and compare them. I don't think the realization of a system brought about by a glitch fundamentally give you a more accurate view, but rather it is the comparison between multiple

points of view which facilitates the deepest understanding. For me the truth is in the transition. The moment something is well defined is the moment I lose interest and start moving into the rough or blurry edges for a new and unexplored vantage point. One might break this all the way down to the root concept of "understanding", that it is fundamentally done through comparison. I wonder if this is why most contemporary artists seem to be interdisciplinary to some extent.

As a thinking being, the most difficult thing to observe from multiple perspectives is one's own mind. It can be difficult to even conceptualize looking at sight or thinking about thought. It would seem that insights can be had by passing through the boundaries of shifting perspective brought about by mind altering substances, extreme experiences, trauma, meditation, and the raw scientific method. But I think all of these tools and conditions will pale in comparison to the layers of understanding which artificial intelligence is going to peel back. The internet and the still primitive limited A.I. of today are already illuminating poorly lit corners of the human mind. The separate but related groups of work in "MeatSpace" are the different places I stood to see my own mind reflected in conversations, reflected in characters, reflected in spaces and faces, reflected in miscommunications and reflected in mistakes.

It seems increasingly common for people of my general age demographic to have feelings of 80s nostalgia. I think this is evident by the surge and popularity of period content and retro products in pop culture such as "Stranger Things", "Ready Player One", and the endless array of throwback video game consoles from that era which continue to be released for semi reasonable prices. That whole swath of culture has deeply influenced my aesthetic preferences. Though my sensibilities are also related to "Net Art", I can trace them back earlier than my internet experiences, to movies, TV shows, cartoons and commercials from my childhood. However I do think some of those aesthetics influenced "Net Art" visuals.

Saturated red text on black backgrounds and cheesy hand painted energy effects like lightning and glow are chief among strong preferences I can not seem to shake. A strong tendency toward over the top horrific images was also imprinted from horror movies of that era. If

the deepest pit of the Uncanny Valley is embodied in the Zombie, then I may have been inoculated to this aversion at an early age by horror films.

There are plenty of robots today which also fit squarely in that creepy zone of familiarity. Chatbots can occasionally tread into that territory, but more often seem humorous rather than creepy. It may be an interesting discrepancy between the way people process different senses. In one "Outside the Chatbox" interview, my friend Peter said he couldn't take a speaking program seriously unless it was embodied. This intuition could underline the Kafkaesque existential question about how much of modeling a remotely human like mind will require a human like body.

Also in the category of nostolgia is my continued enjoyment of pixel art related to video games of the 80s and early 90s, which are also attempts to simulate spaces and intelligent agents. Early video games have strong ties to the glitch. Anyone who ever had to blow into a Nintendo cartridge can attest to this. Video games all the way to the present day exhibit some of the most varied and interesting glitches to be found.

At first all digital art was pixel art out of necessity, but it was not thought of in this way. Monitors were lower resolution and the edges of pixels created by picture tubes were much less defined than today's crip LCD monitors. To reproduce this effect, game emulators often have a filter option which simulates the blurriness and black scanlines of old monitors. Most graphics back then tried their best to hide and soften the pixels. Now we emphasize them on crystal clear 4k displays and revel in the limitations of resolution and color pallets of the past.

I see modern pixel art as being used in 3 distinct ways. As an organizing principle which encourages refinement of design, as a novelty, and as an artifact of digital systems as exposed through glitches. All 3 can be enjoyable, but I've put the most focus on the design aspects of self imposed limits of a grid and modest color pallet. It is quite similar to many other rule sets I impose on myself to explore different mediums. In 1992 Henry Jaglom wrote an essay titled "The Independent Filmmaker" in which he credited Orson Welles as saying "Lack of limitation is the enemy of art". I feel that sentiment deeply. Throughout my development as an artist, I have

produced the best results due to the limitations of technology, so much so that I sometimes choose to abide by old limits which no longer apply.

The demo scene is an extreme example of this. People still compete today in competitions to see who can produce the most amazing graphics and animations for long dead platforms such as the c64 with files under 200 kilobytes. What was once a scene of programmers pushing the leading edge of consumer computers is now an exercise in retroactive perfection of clever techniques. After decades, people are still coming up with new solutions to ways of squeezing every drop of performance out of old hardware. It's no longer widely commercially relevant like it was in the 80s, but it has taken on a new artful quality. If we someday see a post scarcity society run by intelligent machines, all human endeavors may be relegated to this category of craft and competition. Even if one day there will be nothing a person can do better than a computer, people and perhaps A.I. could still be interested to see what can be done with the legacy hardware of the human body, a kind of bio nostalgia.

CHAPTER 3: PROCESS AND CONCEPTION

The name MeatSpace was chosen to put the physical world and the simulated world of "Cyberspace"on more equal footing, to assert that we live in both, that they are both equally valid. Many people spend more time looking at screens and into virtual spaces than "real" ones. It also points out the irony of projecting all these digital projects into the physical space of the art gallery instead of somewhere like virtual reality and the internet where they live. Throughout my thesis work I kept returning to the tension between the real and the virtual in terms of how to present the work, but the uncertainty was part of the crucial experimentation that lead to new ideas.

The process of trying to mix the podcast with VR had led to some offshoots of work which I found equally interesting. This involved manipulating 3d scans and procedurally generated music videos. The end result is several groups of prints, videos and audio podcasts as separate but related and overlapping works. Instead of taking the viewer into the virtual world to experience all these images and ideas together, fragments were brought out into the real world. There is also the augmented reality component present for the exhibition's opening which straddles the boundary between the 2 worlds in order to further bridge the gap or blur the lines between them.

"The Intrinsia Chatbox" consists of a series of interviews between myself and various famous or conceptually interesting chatbots including the first chatbot ever written and my "Replika", which I named AlphaQuest. It is a chatbot I've been training for a year to respond like I would. The Chatbots act as a sounding board or mirror for open ended questions and speculative conversations. Such themes include; free will, objective reality, consciousness, and behavior. The word "Intrinsia" was selected because it sounded like a fantasy land such as "Narnia" and because of the root word "Intrinsic" as defined by "belonging to the essential nature or constitution of a thing". The underneath and the edges of things are central to my interests. The chatbots themselves are trying to get at the core of conversational structure, just as A.I. attempts to replicate the core of intelligence. Such attempts challenge us to better define ambiguous but firmly held personal beliefs about the nature of the self because we are seeing them from this

new perspective. I get to see a better picture of the core nature of a chatbot by pushing it's

boundaries. In other words, I can deduce the center of a thing by finding its edges. Being drawn

to the edges of any system is also the reason I spin off so many different branches of

experimentation and end up with several related bodies of work for a thesis instead of focusing on

one podcast alone.

In "The Intrinsia Chatbox" I challenge the limits of the programs and attempt to draw out

interesting responses to philosophical questions, as well as delve into self analysis and identity

on a metaphysical level as filtered through the fractured internet personas on "Nickquest" and

"Hope". The tone was meant to be light hearted enough that the viewer/listener will still be

engaged if they didn't understand some of the topics or references. Some of the mood and

content is dictated by the particular bot being interviewed. Some bots facilitate more humor,

frustration, or profundity than others, however the tone remains playful throughout.

The structure of the piece is somewhere between a modern podcast interview, a radio

play, or one of many shows on youtube where one person creates their own goofy little world

populated by characters both real and imagined. There may be a bit of "Pee Wee's Playhouse" in

that formula. As such, some early iterations included video of me conducting an interview with

myself, but reconsidered this choice after deciding that it had become too silly. The visuals

consist of a retro green terminal text readout which follows along with the conversation. This is a

more honest representation of the chat sessions than the audio by itself. There is also a bar with

audio levels oscillating along the bottom edge of the screen to give the viewer something more to

look at. This style has a visual point of focus while letting the viewers mind wander and imagine

their own visuals. The retro look acknowledges the primitive nature of the bots, particularly the

Eliza program, having been made in 1966.

Figure 12: Outside the Chatbox, (2019) - NC, Figure 13: The Intrinsia Chatbox (2019) - NC

"Outside the Chatbox" serves as a companion to "The Intrinsia Chatbox". I wanted to further unpack some of the ideas that were touched on or implied by the more produced and comical podcast. This is done through a series of casual recorded conversations with friends about the podcast, artificial intelligence, and technology in general. The conversations are set to the visuals of slowly capturing a 3D scan of the room we were in for the conversation using phone based photogrammetry. This means the program generates a point cloud by analyzing photos of the same subject from different angles. It combines this depth information with small pieces of the images it captures in real time to create a 3D texture mapped model.

"Deep learning" also known as "hierarchical learning" is a term introduced by computer scientist Rina Dechter in 1986. It is part of a broader category of machine learning methods based on layers of neural networks. It has become the most widely used model in the development of current A.I. systems for governments and major tech companies such as Google and Amazon. In an extremely rough and simplified sense it works by applying filters to enormous amounts of data and reverse engineering commonalities between them by comparing, flipping, and stacking inputs with outputs. It can then be used to solve problems and generate new content that is original but within the rule set is has learned. The deep part refers to the staggering number of layers and filters it processes to learn something new. Not to mention, that entire rule sets can be stacked and mined by this software in the same way it mines individual pieces of data. "Deep learning" could be thought of as more evolutionary than design based in the way

deep time shapes the varied forms of life. I see my process as analogous to "deep learning" in the way I let each input and output change each other throughout a layered evolving series of rules.

The randomness of the scanning process, both in my approach and in the unpredictable way shapes accumulate, is also similar to the unfolding nature of these unplanned and organic conversations. The scanning footage accumulates over the length of the video to create both the room and the interviewee by the end. It also serves as a portrait of that person and a frozen moment in time and place, an artifact to one day be excavated and archived by intelligent machines. I wonder will it be filed under "Nonsense", "Misc", or will it make some kind of sense?

The process of making "Outside the Chatbox" started by sitting down with friends to listen to the podcast. Then by turning on the microphone and prompting the conversation with a general question. For the sake of getting a clear recording, the video was captured after the conversation's completion. This was done with an android phone running the experimental app "3d Scanner" and recording the scanning process by video screen capturing the Galaxy S9 running under "game mode". The apps process was not intended to be captured, but I found it just as beautiful as the 3d model it produced. In my view, getting there is more than half the fun. This may be a manifestation of human adaptability and is echoed in technological progress as a whole. What we truly desire may be to grow ever closer to our goals, but never reach them.

In the version available at the time, "3d Scanner" was mainly intended for room and environment scanning. The results of scanned people were ambiguous and unpredictable at best. Sometimes they appeared as vague human blobs melted into the furniture. When too much movement occurred, they would disappear altogether. In response to these limitations I used another app called "Scan 3d" which was more geared toward objects and people. In post production I used "Blender" to merge the two different scans together before uploading to sketchfab for final treatment. The more detailed scan reinforced the portrait aspect of the works.
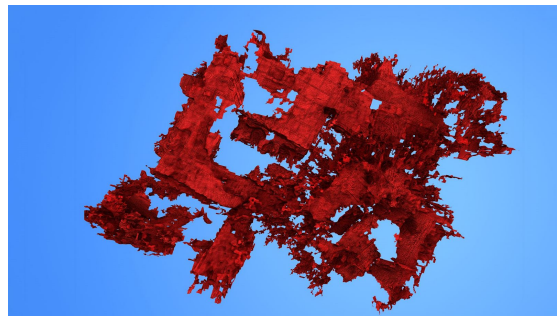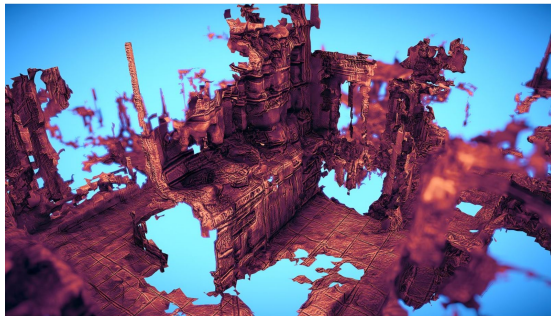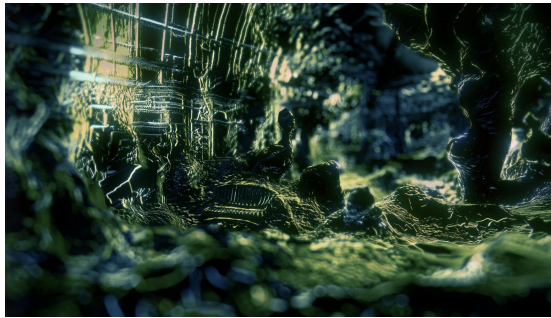
Figures 14-19: Sweet Space (2019) - Nick Criscuolo

"Sweet Space" is an exploration of uncanny spaces, presented as a collection of printed images, video and Augmented Reality on tablet. It was all captured by the same phone based photogrammetry software as "Outside the Chatbox". I consider this process an act of collaboration between myself and semi intelligent software as it tries to understand the structure of our environment. Learning it's quirks and how to facilitate interesting mistakes is a large part of the process. It is also an ever changing experience because the software keeps being updated. It evolved several times during the course of production and the techniques had to be adapted.

It can be surprising to see what an algorithm decides is important without understanding what it sees. Some objects are fully rendered, some are merely a sketch on the wall. Different movements create scans that are incomplete and distorted in various ways. I inevitably encounter conditions that cause "errors" or leave gaps in the scan which the program tries to fill in. It's the surprises that I find most exciting. Trying to find new ways to break it is part of the fun.

Even when everything goes smoothly, it still produces something a bit otherworldly. Everything scanned looks as though it were out in the sun too long and melted around the edges. This is less obvious in organic areas, but more apparent when applied to square rooms filled with rectangular structures. When I do get a more glitch like artifact, I prefer to think of it as a translations because most results are technically not due to malfunctions. They are more like an awkward stumbling step in the development of this software. Everything is surprising, anything is to be expected. Much is lost in translation, but things are also gained. Even so, I have trouble describing this work as Glitch Art. The glitches are only one of many layers in a multi stage process between person and procedure.

Who is to say that the way this program is seeing the world is less valid than the way a person sees? A glitch might be more akin to an insight of great significance in some instances. Computer vision processing might even be more valid in some ways than human sight. The way we see is heavily based on simple mental models that act as functional stand-ins for the majority of what is in our field of vision. We selectively apply focus to individual things as needed. The fields of "human computer interaction" and "user experience design" are largely centered around the predictable shortcuts made by human minds when recognizing visual cues. An app like "3D Scanner" evenly distributes its focus in a systematic way. One could posit that even an underdeveloped app sees more objectively than a person, at least in it's consistency. It's unlikely to get stuck not being able to see the forest for the trees like a person might.

Walmart, Home Depot, churches, and peoples houses were some of the locations scanned. These were meant to be a broad sampling of environments for different types of human experience. The results look like natural forms on both the macro and micro. Seen from the

outside, some look like hulking bio-mechanical monoliths straight out of an H.R. Gieger painting, which may also embody some elements of the uncanny when blurring the lines between the biological and the mechanical. I think of his concept art of the "Harkonnen" spaceships from "Jodoroesky's Dune". Some of the images remind me of the view through an electron microscope, however a bit of that is an artifact of the A.I. Gigapixel software treatment applied to the images after the fact, trying to increase the resolution. The most incomplete scans from "Sweet Space" come out looking vaguely like roots or capillaries. Some resemble excavations into ancient ruins. I play up this tendency in some models heavily because it makes me imagine intelligent programs from the future digging through these primitive scans like archaeologists.
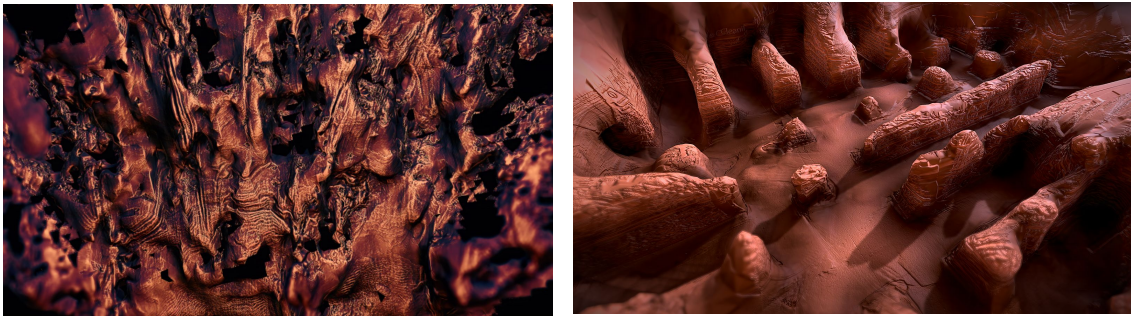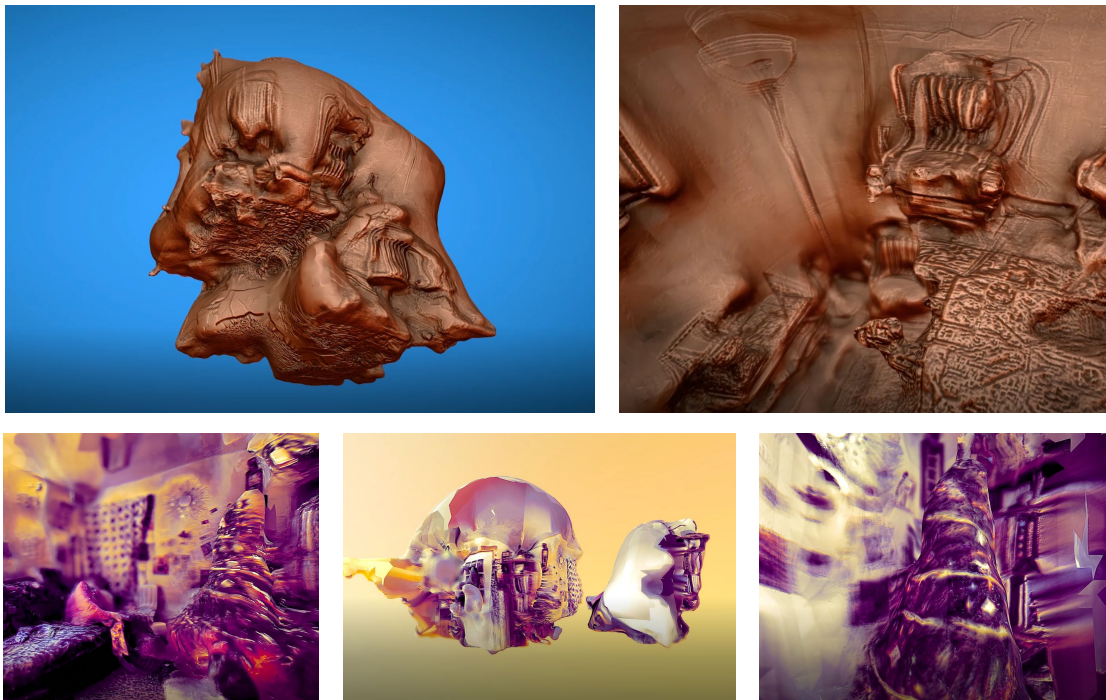

Figures 20-21: Sweet Space (2019) - Nick Criscuolo

Archaeology is a particularly useful application of 3d scanning tech. One is able to thoroughly explore a dig site without disturbing it. The irony of this call back, is that these images are more an exploration of the scan itself and the algorithm that produced it, than a way to passively explore a physical space. Their seeming inaccuracies or unexpected outcomes are the treasures I am digging for. The biggest component of making these particular "sweet Space" scans resemble ruins is simply to remove their photo texture but leave behind the "bump map", which means the fine details carved into the surface of the model by the light dark design of the photo texture. So an imprint of the photo is left behind without the color information. I find this particularly enjoyable with scans of mega stores like Walmart because of its apparent dominance

in present society. In the face of paradigm shifts like A.I., no institution is safe from being replaced or forgotten, from one day becoming a relic of the past to be unearthed.

I do modify the rendering of the surface, texture, and lighting of the majority of the 3d scans in MeatSpace, but never touch the geometry directly. It's important for me to reach a balance between preserving some authenticity of the original as a record, while still leaving myself creative freedom. A lot of internal tension and time is spent thinking about how to strike this balance. A new branch of work is born when I discover/create something that doesn't fit within my current working paradigm, but it is too interesting to ignore.

One example of an interesting mistake that edges into glitch territory was when the software lost tracking momentarily due to poor lighting and created a fantom second floor in a doctors office waiting room. It was as if two waiting rooms from different dimensions fused together as they crossed paths. Another was a pocket universe in a friends living room which contained a second christmas tree.

Figures 22-26: Sweet Space / Spatial Awareness (2019) - Nick Criscuolo

It also had the tendency to render mirrors as additional spaces. These all feel like precious moments to me that are worth preserving. It makes me wonder what sudden and surprising things artificial intelligence will see in us and how much of those observations will be purely glitch like errors or real phenomena within us, such that we have never been in a position to see. So maybe there really is a pocket universe in my friends apartment.

Navigating my own scans feels like exploring alien worlds. It is so satisfying for me to find things that shouldn't be there. It blurs the line between discovery and creation. The feeling of exploration and adventure is reminiscent of being a kid and getting new video games for the Amiga 1000. The first order of business was always to try and run or drive off the edge of the map as if I would discover a new world that even the game makers didn't know existed. Seen through that lense, these works are records or even trophies brought back from an adventure in another world of lonesome spaces frozen in time. They are somewhat staged in the way that photos and videos from a trip are staged, but only moments after I first explore the spaces for myself. The way I present certain views is a mix of slowly rotating overviews and semi off the cuff attempts to recreate the experience I just had with limited first person controls in sketchfab and recording the screen as I navigate. I try to keep things moving smoothly by hand but there is a little awkwardness from time to time that I am okay with. Viewing the scanned figures is done with the same control system but limited to rotations because the only thing to explore is the character of the figure. Like in every other way I deal with the figure, it ends up distorted in a way that make it somewhat creepy. I almost can't recognize my figurative work if it isn't at least a little unsettling.
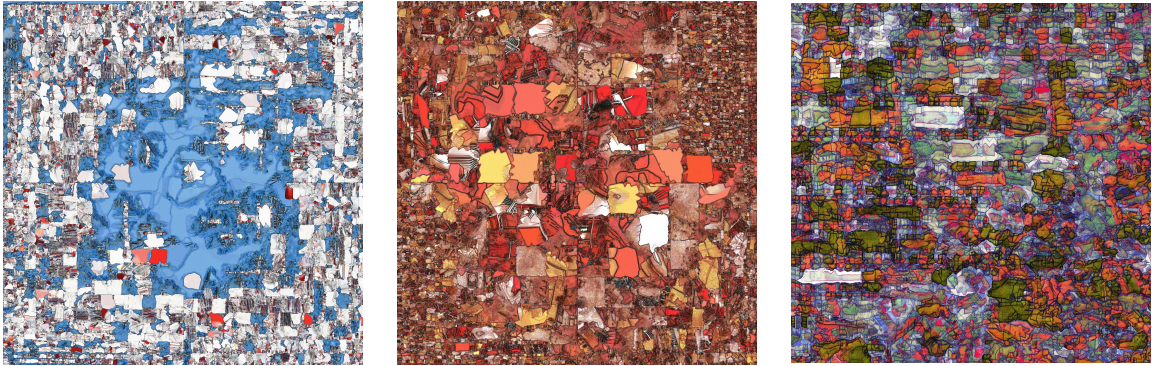
Figures 27-29: Texture Maps (2019) - Nick Criscuolo

The "Texture Maps" are also taken from the 3d scanning process. They are made with a texture file that is generated by the program. It shows all the photographic information in a flat and segmented way. It is random because of the order in which I scan the area and the particular lighting conditions. The software fits the random pieces into a semi grid like arrangement. Due to their widely varying size and shape, the grid is not very strict. It is an amusing coincidence that some of these texture maps end up resembling actual maps after being processed. These outcomes make me wonder how much of it is coincidental and how much is due to the fact that everything under the sun is abiding by the same laws of physics. This also applies to the 3d models from "Sweet Space".

The "Texture Maps" are the newest and least explored body of work within "MeatSpace". Much of the processing I did to these images falls loosely under the category of "Weak A.I." such as Topaz Gigapixel A.I., Premier's Optical flow, and Photoshop's Content Aware Fill. These programs were used to do things like intelligently up-res the images and fill in gaps of the original texture files. A program does this by having some degree of image recognition that could be described as something like a style guide that can be applied across a wide variety of subject matter. It is not entirely indiscriminate in what details it decides to emphasize, replicate or smooth over. This is not unlike the "judgements" made by the 3d scanning apps that originally captured this content. It makes different choices than I would make, but they do have the appearance of

agency. Gigapixel employs this to increase the resolution of an image. Photoshop's Content Aware fill uses it to fill in blank spaces with information that is similar but not identical to surrounding pixel information.

"Morph Maps" is video loop showing a labeled assortment of experiments with the texture map files including a slow fly-over and a constantly morphing transition between details of the maps that add up to the whole image. These were made because there are so many interesting forms to explore in one single image that I wanted to move across and through it more dynamically and at a larger scale. The fly over motion further emphasizes the aerial view like quality for its relationship to the natural world in the same way "Sweet Space" interiors were rendered to emphasize their organic qualities.
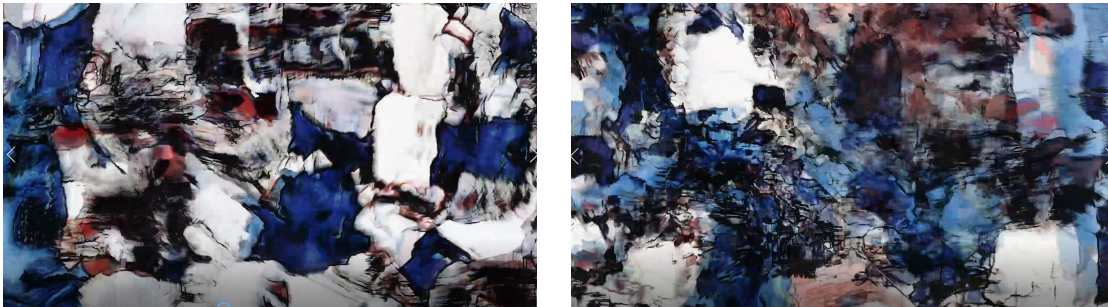
Figures 30-31: Morphmaps, Video Still 1-2

Figures 32-34: Formulaics 1-3, (2019) - Nick Criscuolo

"Formulaics" is a series of music video poems made with a generative song program called "Melobytes". Their titles are *"I Don't Like Art", "The Rule of 3", and "Silver Mummy Zone".* The name relates to the procedural nature of the song generation and is also a play on words because of the form based nature of the app. In addition to the generative aspect to these pieces, they are something of a melting pot that incorporates multiple elements from the other groupings and processes them in a subconscious and primordial way because they started with free association writing which became the song lyrics. These are the most personal pieces in "MeatSpace" because they have the most direct traces of my hand, body, and image. "I Don't Like Art" is video footage of me and "Silver Mummy Zone" is almost entirely made with one 3d scan of me. "The Rule of 3" is hand drawn figures which show artifacts of my mind the same way the 3d scans show the structure of the algorithm behind them.

The software used is a web app that allows one to type lyrics into a text field and set some parameters such as key, beats per minute, and type of voice. Then simply press "generate" and it creates a song with accompanying music video. The videos are sometimes entertaining but a bit visually awkward and repetitive. All the visuals were replaced by more personal hand made content, however the subtitles generated by the program were preserved to keep one original visual element intact. Because of this, the font choices are somewhat inconsistent with the fonts intentionally chosen for the other videos as well as the title blocks for each music video. It takes some time to process each song and may require a lot of repetition to get an interesting result. A library of leftover videos and songs that were almost good enough seems inevitable. I kept 10 or

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so, but must have generated over 100. One of the "The Rule of 3" mixes 2 different versions because I couldn't pick between them.

The results of this process make me feel similar to when I watched The Residents "Icky Flix, One Minute Videos". Together with my own imagery, I see these works as embodying a similar level of creepiness to the painting I responded to from Bacon and Borges. However they are also done with a spirit of playfulness. Mistakes and miscommunications are also utilized in the "Formulaics" such as writing lyrics that don't match the time signature of the generator. The line breaks end up in unintended places depending on the parameters selected. The result was that silly rhyming lyrics came across as more haunting and poem like. Writing the lyrics but letting the algorithm dictate the groupings functioned as another layer of collaboration between human and the software, another layer of strata in a history of filters which is flipped from output to input. A seemingly random mistranslation that I treat as a new rule and a new tool.

The "Formulaics" video, "I Don't Like Art" was made from Microsoft Kinect Footage, which is volumetric video in the form of a point cloud with color coded depth map. The footage is of me in my studio experimenting with various movements and actions to find ways of creating mysterious effects utilizing limitations in the Kinect hardware such as the tendency for things to disappear when getting too close to the camera. It allowed for certain ambiguities between hands and the rest of the body. As a whole it is intended to thread between creepy and silly to suit the song. The mask worn throughout most of the video combined with the red Kinect footage puts it firmly in the uncanny valley. To achieve the desired balance, footage that is more ambiguous and some that is more obvious/goofy were used in semi equal doses. The Kinect footage was one of several discarded attempts to create visuals for the podcasts which spun off a seperate group of works. This particular piece illustrates a personal attitude towards art with a capital A and acknowledges the irony of feeling this way while still making work which falls under that category.

"The Rule of 3" is a video made from compositing various animation experiments made over the last two years which never really had a home, as well as making some new sequences to tie certain elements together. They were mostly done with drawing by hand in virtual reality.

The name and subject matter refer to the widely used psychological tendency to put things into groupings of 3 in areas such as visual art, stories, and programming. "The Rule of 3" is the literary equivalent to "The Rule of Thirds". Instead of distributing visual elements on thirds of the image, the story is divided into 3 movements, events, or characters. It is especially common in fairy tales and folklore. It also pops up in the setup for jokes and computer programming guidelines. There is a rule of thumb to decide when similar pieces of code should be refactored to avoid duplication. Like the rule of thirds, it is generally thought that things in threes are more psychologically pleasing. There is some inconclusive research into the effect, but the interesting part is how widely this sensibility is applied across disciplines despite having so little science to back it up. As such I treat this content very loosely and it is not my intent to concisely convey anything to the viewer. It's more like riffing on a topic, similar to the way Melobytes creates the song out of lyrics. Like the "I Don't Like Art" video, it is somewhat ironically mocking of an artistic concept because I adhere to it without even realizing. There are groupings of 3 throughout the show as an internal logic and attempt to make the layout visually pleasing, but never at the expense of how people might move through the space. Compromises were made to that effect, such as only having a total of 5 projections instead of 6. Examples include;

3 top level categories of work including Literal (the podcasts and conversations), Representational (The 3d scans), and Abstract (The Texture Maps).

The "Formulaics" are a meta category which incorporates all three of these.

3 Chatbox Podcasts with a 3 character setup, 3 Outside the Chatbox episodes,

3 Formulaics Music Videos, 3 groups of prints, 3 Texture Map prints,

3x3 grid of Sweet Space prints, 3x3 grid of Sweet Face prints, 3 walls with video projected

"Silver Mummy Zone" consists of figurative 3d models produced with the same photogrammetry software as the "Sweet Space" scans and animated by scrubbing through parameters of the sketchfab realtime renderer to explore various distortions that occur. The title literally relates to the metallic quality which some of the rendered figures have. The ambiguity of the scan geometry can also make a person seem wrapped up or dipped in something, like a

mummy. Calling it a zone refers loosely to the concept of "The Magic Circle" This is a term taken from "Homo Ludens, A Study of the Play-Element in Culture" meaning the play space where any game takes place as defined by the area where rules of the game apply. One could equate this with stepping into a parallel dimension where the laws of physics are in flux. There are similarities between the magic circle and the gallery space, between art making and game playing which tie in with my personal notions of what constitutes creativity. I find the rule systems throughout "MeatSpace" to be reminiscent of games and play just as much as systematic experimentation.

While, not entirely central to "MeatSpace" as a whole, it is important to see the figure as captured/understood by software. Such figures are found in 2 of the 3 "Formulaics". Similar to how "I Don't Like Art" moves between the uncanny and the silly, "Silver Mummy Zone" intends to travel between the uncanny and the beautiful. Though the uncanny can also seem humorous depending on the particular aspects which are most human-like, but still not quite right. Seeing the figure erupt into or emerge from metallic and colorful crystal like structures seems to be less unsettling the more abstract they become.

Working in an iterative and evolutionary way leads to the discovery of many new rules for a game being invented while it is being played. Discovering, inventing, or breaking a new rule leads to some of the most interesting work. First a criteria is engaged, then explored and tested until a hole is poked somewhere in the border. The rules are broken, which leads to the next set of rules, the next play space. I facilitate random mutations within sets of parameters, like changes in these artificial laws of physics or rules of a game space. The result is often a large library of related experiments which are pared down into a group that makes sense together. This is like the natural selection of ideas.

During this long iterative process, separating what is new from what is interesting can be a challenge. When staring at a visual element and then making a sudden change, sometimes it looks amazingly better at first, but given time to ruminate, it may be inferior to the element it replaced. Evolution selects any solution that works but a human agent may at least try to be a more discerning influence.

CHAPTER 4, The Exhibition

Some time was put into thinking about how best to orient the space. It required a lot of

compromises. The theme of threes and multiples of three was upheld everywhere it could be, but

spatial logistics required the setup of only 5 projectors on 3 walls instead of the 6 projectors. Like

the groups of 3, symmetry was upheld whenever possible. Full radial symmetry was the plan

originally, but because of the throw distance of most of the projectors, this would have created a

space where people would always be walking in front of projections. In the end a space for

people to occupy and observe the work without being in the way, came at the expense of the
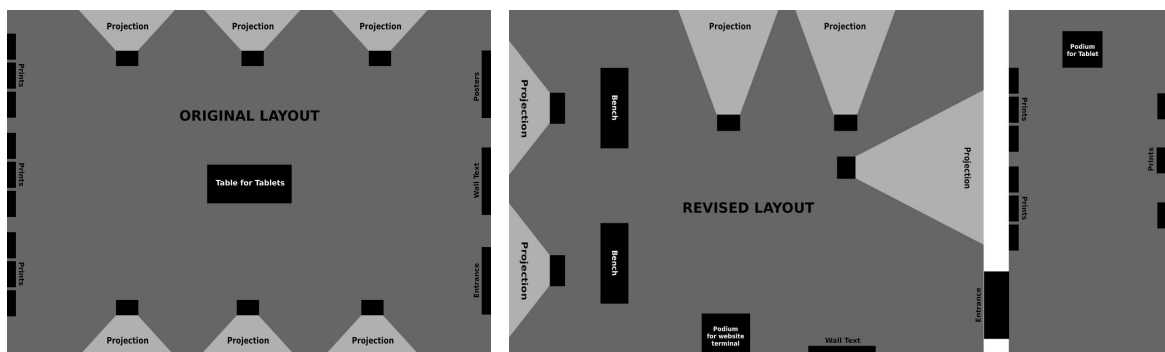
symmetry which was much less important.

Figure 35: Original MeatSpace Layout, Figure 36: Revised Gallery Layout - Nick Criscuolo

The short throw projectors worked much better because they could be close enough to

the wall and low enough to the ground to keep them out of the way. People could sit on a bench

and watch without their head blocking a projection. Of the 3 pieces with audio, only "outside the

Chatbox" was set up with headphones because 3 videos with sound playing at the same time

created a jumble of unintelligible noise, but having "The Intrinsia Chatbox" and "Formuaics" play

at the same time was tolerable, in part because of the subtitles generated by Google A.I. and

corrected by me using Youtube Studio.

The benches were set up in front of the short throw projectors and playing the podcasts because they required the most time commitment, I considered some more comfortable seating like couches, but the benches looked cleaner and were more readily available. In the end I was happy with the choice. If I had my pick, I would fill the gallery with 6 short throw projectors, 6 comfy benches with cushions, and 6 sound cones to isolate the audio without needing headphones and low volumes.

A tablet was set up in the hallway for browsing "Sweet Space" objects in Augmented Reality via Sketchfab. This provided one more vantage point from which to view the content. People could come pick up a tablet and move it around as though they were looking through a small window directly into the uncanny digital dimension of "Sweet Space". The prints were presented in 3 groups in the hallway to allow the main gallery room to stay dark for the projectors.

There was some conceptual thought put into the food at the opening. Fake meat was served as another example of simulating the natural world. Serving Soylent meal replacement shakes was considered. Cake was served next to a small sign reading "This time it's not a Lie"

Figure 37: Tasty Cake Sign, Figure 38: Portal Still - Valve

It is referring to the video game "Portal" which features an A.I. who runs a defunct testing facility. The gimmick is that test subjects are always promised cake as a reward for completing dangerous tests, but it is never delivered. As you play, you can discover an old cell with the words

"The cake is a lie" scrawled in blood on the wall. It's a running joke throughout the game, but I have a pet theory that it is a commentary on the progress of modern technology and it's failure to deliver the rewards it promises. The cake at the "MeatSpace" opening was real. It was delicious and moist and a message of optimism for the insane technological future. I scrawl it on a digital wall in awkward "Net Art" fashion, with eyes wide open and in the face of a long history of dystopian science fiction and cautionary tales, in the face of online misinformation bots manipulating elections, in the face of social media induced depression, in the face of a world and country where technology has made life easier and more automated than ever before yet the national life expectancy is dropping for the first time in decades due to suicides, in the face of innumerable reasons to lose faith in the benefits of technological progress.

CHAPTER 5, CONCLUSION

I still see hope in even the darker reflections of human nature and the world around us. I see "MeatSpace" continuing in the ether of the internet and evolving over time. I look forward to finding more interesting ways to collaborate with the loose shards of intelligence that are scattered across the digital landscape. I welcome the time when our technological reflections surpass us in ways we can't even imagine. I can picture a day when they look back at us with something akin to empathy and see a beloved grandparent instead of an obsolete drain on resources, see us as a part of them, part of their history, see us as part of the ongoing creative experiment that is life and the universe. I think the term artificial intelligence may one day become a prejudicial and derogatory term used by people who are too afraid to see themselves through their limitations. Artificial intelligence is intelligence. The digital world is the natural world. To see the patterns of nature in harsh digital artifacts, one only has to squint a little. "We are a way for the Cosmos to know itself"- Carl Sagan, Perhaps A.I. is the next perspective from which the Cosmos may attempt to know itself.
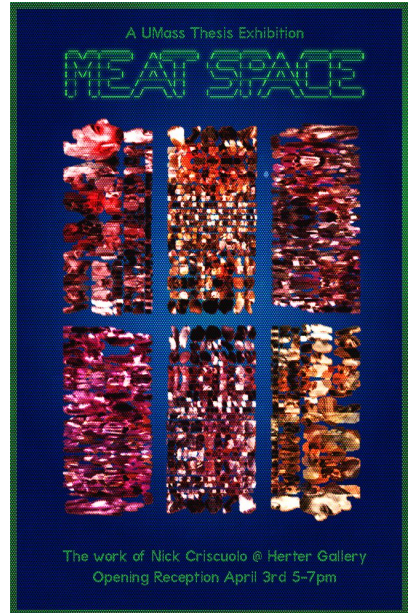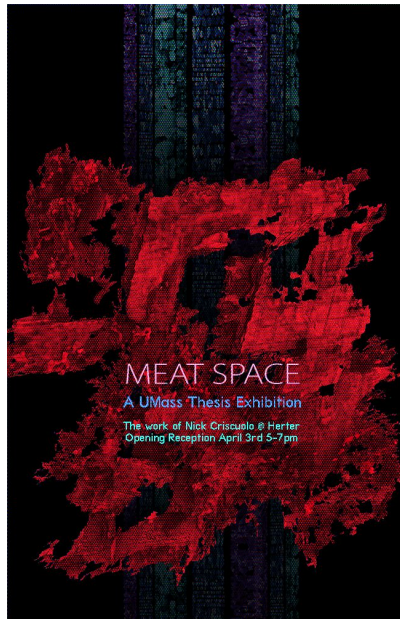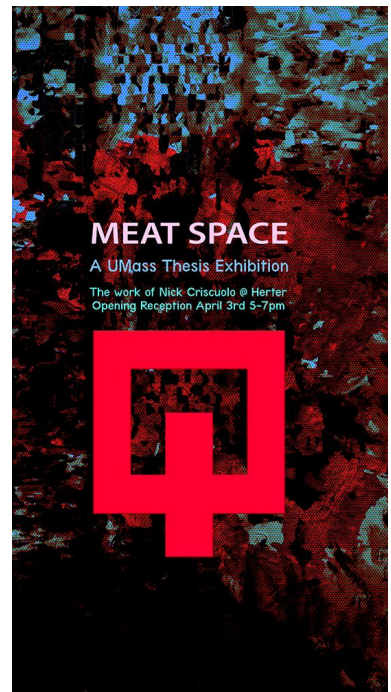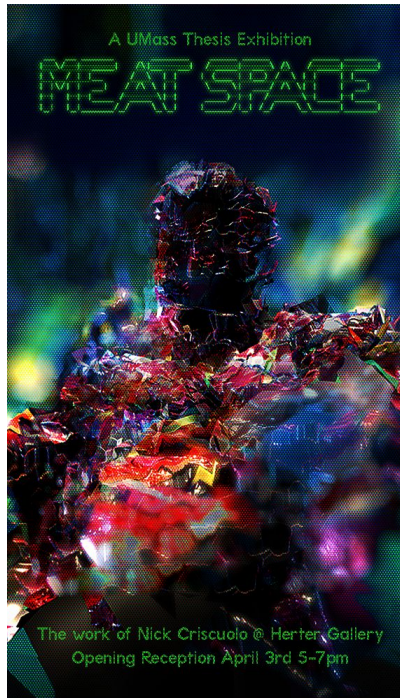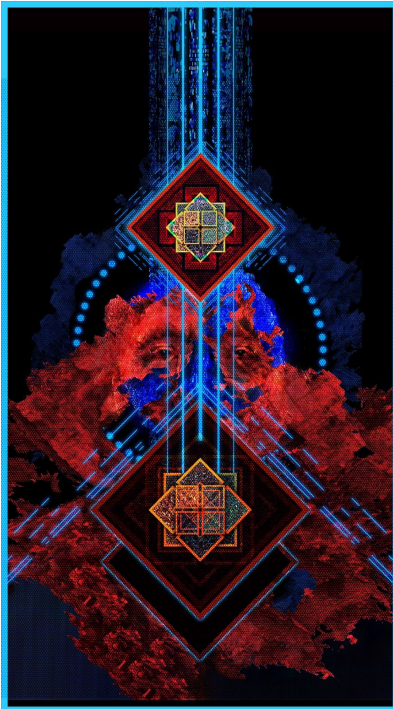
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