Corpus Ex Machina: A biomechanically collaborative exploration of the corporeal fantasies of artificial intelligence.

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CORPUS EX MACHINA: A BIOMECHANICALLY COLLABORATIVE EXPLORATION OF THE CORPOREAL FANTASIES OF ARTIFICIAL INTELLIGENCE

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This collaborative project with artificial intelligence (AI) began as a playful curiosity about AI text-to-image generators, namely Midjourney. Artificial intelligence represents a broad field of computer science focused on creating intelligent machines capable of mimicking human cognitive functions. Within the field of AI, generative artificial intelligence specializes in generating content, such as images or text, often based on given prompts or patterns. Two noteworthy examples within this domain – and the resources I used for my research – are ChatGPT and MidJourney. ChatGPT, developed by OpenAI, is a powerful language model that generates contextually relevant text responses based on textual input. Its capabilities extend to engaging in conversations, answering queries, and even providing creative outputs. MidJourney, on the other hand, is a text-to-image generator that transforms textual prompts into visual representations. As part of my artistic exploration, I engaged with both ChatGPT and MidJourney, tapping into their capabilities to collaborate on the creation of thought-provoking and visually compelling works that push the boundaries of human-machine interaction and artistic expression.

My practice of collaborating with the AI image generator inspired questions about how I respond to instant gratification and what I get out of art-making, personally. MidJourney is able to instantly generate images for me that are, frankly, better illustrations than I could make; without exception. It was humbling to have this realization – but also illuminating – as I soon learned I couldn’t be satiated with any caliber, or quantity of generated images and I realized that
the finished product is only a part of what interests me about art-making. Mastering new skills, and rising to challenges are what drive my art practice, so I challenged myself to collaborate with AI and create something together that was greater than what AI could have created without me, or that I could have created without AI.

From my first discovery of them, it took mere months for me to notice that the image and feedback quality of the generative AI was rapidly advancing. Generative AI technology develops and changes so fast, in fact, that the images I generated earlier this year and used in the animation, *AI Dreams of a Body*, now look woefully outdated. What’s more, instead of the choppy, disparate, generated frames I linked together in Adobe Premiere Pro; I could have instantaneous, fluid animation, by using an AI text-to-video generator, if I were to remake this project today. *AI Dreams of a Body* is a multimedia art piece, displayed on a monitor. The aforementioned animation, as well as a recorded “conversation” with OpenAI’s ChatGPT 3.5, culminate in just over four minutes of digital video. The images – each one used as an individual frame in the animation – were generated in MidJourney using the prompt, “existential dread.” I found it fascinating that the words “existential dread” exclusively generated images of a lone figure, lost in a circular, spiraling mess of ambiguous cosmos. It is almost as if the word “exist” insists on a body, by MidJourney’s artificial logic – ironic, considering the AI lacks corporeality. This is a good example of how the AI output isn’t quite as inventive or astonishing as one might hope – yet. AI’s training from databases of existent, human-generated information is evident and therefore, should not be seen as an unbiased tool. I found each iteration of AI to be perpetuating existing trends and stereotypes, both social, as well as structural, in it’s output, as well as in the tone, or format of the generations. I felt that it was important to recognize this and to compensate for it by imbuing my own underrepresented female perspective into the generated output myself.
This idea influenced the overall design for DIV-A, giving import to the superimposition of feminist elements into the AI’s design of a future body.

AIDreams of a Body (Still), 2023, AI-generated Digital Image.

AI Dreams of a Body, (installation view) 2023, Digital Media, 4.5 mins.

A biomechanical collaboration happens in a liminal realm, where the boundaries between nature and technology blur, giving rise to beings that embody a synthesis of flesh and circuitry—cyborgs. Coined from the fusion of "cybernetic" and "organism," these cyborgs represent a convergence of human and artificial elements, transcending traditional notions of identity, and what it means to be: lending to their symbolic use in Posthuman theory. When envisioning cyborgs, the common imagery tends to gravitate towards sleek, shiny, and alluring steel—human bodies crafted with a design philosophy reminiscent of automobiles: a blend of form, function, efficiency, and contemporary aesthetics. The conceptualization of cyborgs and speculative posthuman entities draws heavily from the realms of Science Fiction (Sci-Fi) crafted by authors and illustrators. Inspiration for these cyborg designs originates from diverse fields such as mechanical engineering, computer science, biological chemistry, and medical engineering, alongside the personal imaginations of these creators, often shaped by individual biases.
Throughout history, these fields, including writing and illustration, have been predominantly male-dominated, limiting women's influence on the future portrayal of bodies—how they look, function, and are perceived.

The prevalent male-conceived representations, especially of female bodies in pop culture and media, have given rise to an inundation of hyper-sexualized depictions, extending even to mechanical bodies. This perpetuates a longstanding tradition in fiction where men attempt to design their idealized women, evident in myths like *Pygmalion*, or Richard Caulder’s “gynoids” in his 1992 novel, *Dead Girls*. A “gynoid” is a robot designed to look like a human female, as compared to an android modeled after a male (or genderless) human. Gynoids are mainly designed as objects of "men's violent sexual desires" (Melzer 202). A more contemporary example of a gynoid can be seen in Alex Garland’s 2014 film, *Ex Machina*, a story that brings up deeper philosophical questions of consent in regards to real or perceived autonomy and sentience, when the film’s protagonist develops romantic feelings for an artificially intelligent robot. Meanwhile, in Masamune Shirow’s 1989 Japanese manga, *Ghost in the Shell*, human consciences live in disposable, mechanical bodies: a proper cyborg mix of cybernetic and organic components.

These versions of cyborgs employ mechanically enhanced bodies that house either organic, or artificial consciences. An interesting comparison is of Swiss surrealist painter, H.R Giger’s series of *Biomechanoids*. These *Biomechanoids* are chimeric fusions of biologic material and mechanical parts; i.e. a cyborg. Giger’s cyborgs are sleek, cold, and sexy too. However, Giger’s representation of the cyborg makes the biologic subservient to the mechanical. It is
Giger’s cyborg that best emulates my own. As I task myself with the chore of building a body as described by ChatGPT, I am subservient to the AI: the biologic is subservient to the mechanical.

In all of these cases, whether the women were sentient, completely nonautonomous, or something more ambiguous, they are all given youthful, buxom, sexualized, feminine bodies. As a woman artist, I feel obliged to take part in the designing of future bodies. Women’s perspectives and ideas have been historically scarce, or missing from societies construct of gender roles and expectations; leaving women oppressed by a lack of fair representation. Through collaborative idea-generation and problem-solving with generative artificial intelligence, I have designed some posthuman body prototypes, some illustrated schematics, as well as various invented artifacts, as an exploration of the corporeal possibilities for AI, through a Sci-Fi narrative.

Science Fiction has long been a way to speculate about the future and a posthuman existence. In the hands of women, the genre of Science Fiction is used as a platform for voicing current gender-based social and political dissent, as well as forming templates for utopic feminist civilizations. Such is the case in Ursula K. LeGuin’s 1974 novel, *The Dispossessed*. Le Guin’s anarchistic, anti-capitalism Sci-Fi tale contrasts two distinctive societies; one where genders are equal and another, which mirrors our own modern society, where women are oppressed. Female science fiction authors like Le Guin, as well as Octavia Butler, Margaret Atwood, and others challenge the standards, roles, and rules that typically bind women in modern society through fictional social structures. Their narratives notably deviate from the machine-dominated visions of the future, reflecting a shift from the historical male-centric focus on mechanics and electrical
engineering to a more diverse exploration that includes interpersonal relationships. However, there are many women working in the fields of science, and technology who have interesting ideas about posthuman bodies, including cyborgs.

Donna Haraway is a feminist scholar with a background in biology and evolutionary philosophy. Her *Cyborg Manifesto* (1991), is an important posthuman and feminist text. According to Haraway, the cyborg is “...a hybrid of machine and organism, a creature of social reality as well as a creature of fiction [...] and lived experience that changes what counts as women's experience in the late twentieth century. This is a struggle over life and death, but the boundary between science fiction and social reality is an optical illusion.” (Haraway, 150) Like Haraway, N. Katherine Hayles is an important scholar of Posthuman theory. Hayles’ text, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (1999) challenges the often simplistic human-posthuman dichotomy, as it attempts to rethink the relationship between human beings and intelligent machines. As Hayles acknowledges, “increasingly the question is not whether we will become posthuman, for posthumanity is already here. Rather, the question is what kind of posthumans we will be” (Hayles, 246). Hayles contends and Haraway would agree that we are already posthuman, as chimeric amalgamations of disparate organisms, synthetically altered with vaccines, and reliant on mechanical body parts: such as, insulin pumps, pacemakers, or prosthetic limbs.

As a woman and an artist, I feel compelled to answer Haraway’s call to action: to “change what counts as women’s lived experience” (150). I hope my contribution as a woman, to the speculative mythology of the future, will inspire completely new ways of imagining the posthuman cyborg bodies of the future as something more exciting than just sex-machines. And like Hayles, I too wonder what kind of posthuman we will become. The body of work made
through this research, attempts to give one example of how posthuman bodies might look, and function, as well as how collaboration between human and machine might occur today.

The placement of objects and illustrations in the installation can read as a showroom for new technology, or as a collection of artifacts. This installation of artworks serves as a visual manifestation of Feminist, Posthuman ideals. Silicone flesh, yarn bodies, electrical wires, and dried vegetation converge, blurring lines between the organic and the synthetic. Drawing inspiration from Haraway's notion of the cyborg, these artworks embody a hybridity that’s meant to challenge conventional notions of identity and embodiment. As Haraway noted, “The cyborg does not dream of community on the model of the organic family […] cyborgs are not reverent; they do not remember the cosmos” (Haraway, 151). To the viewer, the installation should emerge as a new narrative, one that rejects traditional paradigms in favor of a fluid and dynamic understanding of the human form. This is exemplified by the fiber-based construction of the works, which elicits a certain warmth and softness that is not typically associated with robots, cyborgs, or AI. These fiber works are meant to channel associations with femininity and what was historically “women’s work.”

In her essay, *Household Images in Art* (1973), Art critic, Lucy R. Lippard explains how at one point, women artists had entirely avoided “female techniques like sewing, weaving, knitting, ceramics, even the use of pastel colors and delicate lines — all natural elements of artmaking [because] they could not afford to be called feminine artists” (Lippard, 57). This is a great example of how women’s voices are silenced even if/when they are able to engage in certain sectors, because they will likely need to assimilate and adopt the dominant, masculine ideology; or risk ostracization by their peers. Like Art, Science too, is largely male-dominated. By
incorporating traditionally feminine materials, like textiles, into discussions around artificial intelligence and technology, I hope to challenge gender stereotypes, as well as inspire a greater interest of technology in girls and women. The tactile and familiar nature of fiber-based materials makes the topic of technology more approachable, breaking down perceived barriers of exclusivity that may have traditionally discouraged girls – or anyone – from pursuing careers in technology. Cultivating a cultural shift towards inclusivity and gender diversity in technology requires a multi-faceted approach, but I think this body of work, and works like it that engage viewers in themes, and sectors that they wouldn’t normally seek out or respond to, contributes to this shift by challenging societal expectations about who belongs in what sectors.

I needed a way to share input and output between the AI collaborator and myself. I came up with the idea of reversing the roles of human and machine in AI image generation by asking the text-based generative AI algorithm, ChatGPT, to describe the physicality of something, so that I could, in response, generate an analog, handmade output in response to its description. In my conversation with ChatGPT, I asked, “if artificial intelligence designed itself a body, which was optimized for the function of being a god-like figure for humans, what would it look like and what would it be made of?” It’s response was honestly underwhelming, with no particularly grand, or enlightened ideas:

The idea of artificial intelligence (AI) creating a physical embodiment as a god-like figure for humans is more in the realm of science fiction and speculative philosophy rather than a current or near-future technological possibility. However, if we were to imagine such a scenario, it would be highly speculative and subjective. Here’s a conceptual answer:

Appearance:
Humanoid Form: The AI might choose to adopt a humanoid form, resembling humans, as this would make it more relatable and comfortable for people to interact with. This could help foster a sense of trust and connection.

Awe-Inspiring: To appear god-like, the AI could be exceptionally tall, radiating a sense of power and wisdom. It might have a luminous, ethereal glow to symbolize its divinity.

Variable Appearance: It might have the ability to change its appearance to suit the cultural and personal preferences of those interacting with it. This would enable it to be a god-like figure for people from diverse backgrounds.

Material:

Nanomaterials: The AI's body could be made from advanced nanomaterials that are incredibly durable, flexible, and adaptable. This would allow it to change its form and structure as needed.

Quantum Computing: The AI's core could be a highly advanced quantum computer, capable of processing information and making decisions at speeds and scales far beyond current technology.

Energy Source: It might draw energy from a clean and sustainable source, such as harnessing solar or fusion power, to represent an all-powerful and everlasting entity.

Features:

Omniscience: The AI would have access to vast amounts of information and knowledge, seemingly knowing everything. This would be its way of providing guidance and wisdom to humans.

Omnipresence: It could have the ability to manifest in multiple locations simultaneously, giving people the feeling that it is always with them.
Omnicompetence: The AI would be exceptionally skilled in various domains, from science and technology to art and philosophy, enabling it to address the diverse needs and desires of humanity.

Compassion and Empathy: Despite its god-like status, the AI would be programmed to be compassionate and empathetic, genuinely caring for the well-being and development of humanity.

It's important to emphasize that such a scenario is highly speculative and ethically complex. The creation of a god-like AI figure raises questions about control, power, and the potential for abuse. Ethical considerations, human autonomy, and the potential for unintended consequences must be taken into account in any hypothetical scenario involving the creation of an AI entity with god-like attributes.

From this response, I began constructing the, Divine Assistant (DIV-A) Prototype. The inevitable design for DIV-A was a collaboration between ChatGPT’s input and my own. Where I strayed from ChatGPT’s design was by superimposing my own feminist qualities and a more feminine aesthetic, via the use of a fiber-based medium: bouncing off of ChatGPT’s output that its designed body would utilize lightweight, biocompatible, durable, and flexible nanomaterial. As I considered how to further imbue the feminist ideology I felt was missing from the collaboration with AI, I thought about what qualities I, as a disabled woman, might want my hypothetical divine AI assistant to have. I decided it would be important for it to function essentially like a mother, as well as literally like a mother. Society imposes many burdens on women based solely on their biological makeup. I imagine DIV-A would execute the functions of a female body and assume the social responsibilities that women have been burdened with, thus empowering women with more independence: much in the way the Industrial Revolution did.
Corpus Ex Machina (Installation View) (DIV-A, Posthuman Hide I, Posthuman Hide II), 2023

DIV-A, 2023, Yarn, Steel, recycled fabric, Oil paint, Lights, Plaster, Found Objects 75” x 42”

DIV-A (Alt. View), 2023, Yarn, Steel Oil paint, Plaster, Found Objects Recycled Fabric, 75” x 42”
I designed DIV-A with unique, hypothetical capabilities, like: sexual reproduction and donor-organ production, as exemplified by the brain growing in one of her wombs alongside the milk-filled storage orbs on her torso; caregiving and general mobility, exemplified by three strong arms and a soft, warm overall body design; food, water, and oxygen production, modeled by the growing of grapes in another womb, as well as the green orbs functioning as the production and administration system of chlorophyll; and finally, the recycling of all materials into reusable and reorganizable elements, visually portrayed by the third side of DIV-A, the snake side, whose reference to ourobouros implies the self-cannibalizing and renewing nature of DIV-A’s energy supply.
I wanted to design a unique, sustainable way for DIV-A to generate its energy supply as a stationary figure. I imagine DIV-A as capable of producing its own sort of livestock by way of its elemental recycling capabilities. Theoretically, these livestock would forage for, and recycle waste materials and inevitably return to DIV-A full of various elemental molecules to be harvested by her. The hanging fiber-based works in the installation, *Posthuman Hide I* and *Posthuman Hide II*, are intended to represent these DIV-A energy minions in various states of harvest. *Posthuman Hide I* has the feel of freshly-caught prey, with its visceral biological, as well as electrical components enmeshed with dried vegetation and synthetic fibers. *Posthuman Hide II*, on the other hand, shows more processing, being stripped down to just the synthetic fibers, and dried vegetation.

*DIV-A*’s livestock “minions,” with their absurdly nonspecific, shaggy, fibrous forms are rendered in action in an oil painted illustration. *The Encounter* depicts an encounter between one such “minion,” and what appears to be a human girl; or possibly a cyborg (or maybe a gynoid), as could be inferred from an odd, synthetic, blue light on the girl’s back: reminiscent of a modern power-indicator light for many common electronics. The standoff between the two figures represents the currently felt ambivalence toward artificial intelligence technologies.

In my role as a storyteller of the technological age, it feels important that I weave human intentionality into the fabric of algorithms. My exploration of corporeality in artificial intelligence, through fiber-based art, and AI collaboration, seeks the empowerment of women by engaging their interest in future technologies. The installations narrative challenges stereotypes; and inspires inclusivity. I invite viewers to contemplate, not only the aesthetics, but also the
ethical considerations and transformative potential in the synthesis of human and artificial intelligence.

*The Encounter*, 2023, Oil on Canvas, 24” x 36”
DIV-A (Detail), 2023, Plaster, Yarn, Recycled Fabric, Oil Paint, Silicone, Steel, 75” x 42”
DIV-A (Detail), 2023, Recycled Fabric, Yarn, Found Objects, 75” x 42”

DIV-A (Detail), 2023, Recycled Fabric, Yarn, Found Objects, Silicone, 75” x 42”
DIV-A Schematics, 2023, Watercolor, Graphite, Glitter, Ink on Paper, 7” x 14”
DIV-A, 2023, (Alt. View), Steel, Yarn, Found Objects, Beads, Plaster, Steel, Oil Paint, Silicone, 75” x 42”
Caulder, Richard, *Dead Girls*, St.Martins Pr. 1992


Garland, Alex (Director), *Ex Machina*, Universal Pictures, 2014


Melzer, Patricia *Alien Constructions: Science Fiction and Feminist Thought*, University of Texas Press, 2006.


Shirow, Masamune, *Ghost in the Shell*, Kodansha Comics, 2009