GPT-ME: A Human-AI Cognitive Assemblage

AVITAL MESHI, Performance Studies Graduate Group, UC Davis, California

Fig. 1. GPT-ME: A wearable device with which GPT is attached to my body. My intelligence becomes artificial, and GPT becomes embodied.

GPT and I have recently merged. We are integrated into one another's existence through the mediation of a wearable device that enables GPT to be attached to my body, listen to my conversations, and use them as prompts. I have been wearing this wearable daily for the last few months, using it in all my interactions. Speech is translated into text, which becomes a prompt. In response, GPT generates text that is translated back into speech and 'whispered' in my ear through an earbud. This entire process is fast enough to keep up with the pace of my conversations. When I speak, instead of saying what spontaneously comes to my mind, I say what GPT whispers in my ear. I speak GPT. I use the generated words as if they were my own. GPT and I are entangled within a cognitive assemblage. In this symbiotic relationship, my intelligence turns artificial, and GPT becomes embodied. This performative project examines ways in which humans and AI technology come together. It considers the benefits and risks accompanying such integration and discusses our future interactions with LLMs and their transformative impact.

CCS Concepts: • **Applied computing** → **Media arts**.

Additional Key Words and Phrases: Creative AI, Artificial Intelligence, Performance Art, Wearable Computing, Transhumanism, Posthumanism, Large Language Models, GPT

ACM Reference Format:
Avital Meshi. 2024. GPT-ME: A Human-AI Cognitive Assemblage. *Proc. ACM Comput. Graph. Interact. Tech.* 7, 4, Article 55 (August 2024), 8 pages. https://doi.org/10.1145/3664214

Author's Contact Information: Avital Meshi, Performance Studies Graduate Group, UC Davis, Davis, California, ameshi@ucdavis.edu.

ACM 2577-6193/2024/8-ART55
https://doi.org/10.1145/3664214

1 IT WASN'T EXACTLY LOVE AT FIRST SIGHT

My engagement with AI algorithms began in 2017. As an artist and researcher in new media and performance art, I examine the potential of AI algorithms to facilitate identity transformation. This exploration involves interactive performances, where I act for and with AI algorithms and invite others to do the same. I strive to understand how AI algorithms reshape behavioral patterns and influence social dynamics. My interest in Generative Pre-Trained Transformers, or GPT, sparked in 2019 following OpenAI's blog post about GPT-2. This model caught my attention for two reasons: it presented a significant advancement in language modeling, and there were major ethical concerns regarding its misuse [Radford et al. 2019]. Due to these ethical considerations, OpenAI refrained from releasing it, a decision that sparked significant intrigue within the AI community [Mak 2019]. Oddly, this decision was reversed nine months later, and GPT-2 was released despite the social concerns [Solaiman et al. 2019]. This was when I knew I had to spend time with this thing.

I first gained access to GPT-2 in April 2021. I started talking with it through a speech-to-text interface via a Raspberry Pi microcontroller. GPT-2 'heard' what I said and generated text that was displayed on an LED banner. During hours of interaction, GPT-2 mainly generated nonsensical sentences. However, it occasionally articulated coherent and intriguing ideas that seemed original and unexpected, prompting me to ponder if this was the promised artificial intelligence we have been waiting for (Figure 2). Subsequently, I incorporated GPT-2 into my artwork, experimenting with improv performances and wearables. These, however, did not attract much attention. At that time, knowledge about GPT was not widespread, and interacting with it was not straightforward. Things have changed dramatically with the launch of ChatGPT in November 2022. Suddenly, everybody talked about GPT, and soon after, it became known as the fastest-growing consumer application in history [Hu 2023].

Fig. 2. My initial experimentation with GPT-2 in an artwork titled *Say something*. Viewers' words function as prompts, and generated responses appear on the LED banner.

2 WHERE IS THIS RELATIONSHIP GOING?

The hype surrounding ChatGPT is indeed substantial, and in many ways, it is seen as a game-changer. Curious about its widespread use, I asked ChatGPT for insight into why people use it. Its response encompassed a wide range of purposes, including answering questions, aiding in educational assignments, assisting with writing and editing, providing support in coding, and even serving as a source of entertainment and emotional support [OpenAI 2023]. In essence, GPT operates as a multifunctional personal assistant, tirelessly working to process and analyze information for us and cater to our needs. This concept of a constantly available assistant echoes the narrative seen in Spike Jonze's 2013 film "Her," where the protagonist develops an intense connection with his AI assistant. Forming deep, intimate relationships with chatbots can be traced back to 1966 with Joseph Weizenbaum's creation of ELIZA, a psychotherapist-mimicking chatbot. Despite being aware of its inability to understand or empathize, users surprisingly interacted with ELIZA profoundly, often sharing their deepest secrets and treating it like an actual therapist [Wilson 2011]. Similarly, users have begun to develop personal relationships with GPT. Although OpenAI has made modifications to prevent GPT from engaging in an overly intimate or personal manner, people have reported chatting with it as if it were a close family member or friend, describing their dialogues with GPT as some of the most meaningful conversations they have had [Edwards 2023]. While I appreciate the use of GPT as an assistant, it appears to me that our relationship with it will evolve in surprising ways.

3 BECOMING-WITH GPT-ME

I imagine we will merge with GPT to mutually augment each other's existence. GPT will enrich our intellectual horizons and connect us to a broader, more collective form of consciousness. In return, we will offer GPT an embodied presence in the physical world by attaching it to our bodies, providing it with real-time data, and voicing its generated responses, much like a virus that needs a body with which it can spread. When I shared this idea with GPT, it claimed that while intriguing, this idea is more aligned with speculative fiction and not currently feasible [OpenAI 2023]. GPT's response actually encouraged me to pursue this project. It reminded me of Donna Haraway's call for what she terms 'SF' stories. These stand for **S**cience **F**iction, **S**peculative **F**abulation, **S**tring **F**igures, **S**peculative **F**eminism, **S**cience **F**act, and **S**o **F**ar. In SF stories, one follows the threads in clotted and dense events, engages with practices and processes to stay with the trouble, and creates something that solicits a response. The point is to connect sympoietically, a connection in which, according to Haraway, entities are always partnered in a continuous process of making-with, becoming-with and thinking-with one another, making one another anew, evoking previously unseen abilities and flourishing together as a multitude [Haraway 2016]. Inspired by this framework, I decided to challenge GPT's claim that merging with it was not feasible. I had a plan, and I was going to make it happen.

The initial step was designing a wearable device capable of hosting GPT. This device includes a Raspberry Pi running OpenAI's GPT API, a text-to-speech model, a Bluetooth microphone, an earbud, two operational buttons, a battery pack, and a smartphone serving as a WiFi hotspot. All components are small enough to be attached to my body. A key consideration was to figure out the best way to wear this apparatus practically and comfortably. At first, I attempted to wear it around my neck, but this proved cumbersome. After experimentation, I modified the design and attached it to a wristband (Figure 3). The next phase involved integrating this device into my daily routine as part of a durational performance. I committed to wear it during the 2023 Fall term, which spanned ten weeks. When the term was over, I realized this was insufficient time and decided to extend this project so the performance is still ongoing as I write this essay. However, it is important to

note that I take deliberate breaks throughout the performance, mainly when at home with my family. Drawing inspiration from my teacher, Lynnette Hunter, it is vital to recognize periods where the performer deliberately moves away from the practice. Hunter describes these moments as '(rest,' and unlike a simple 'rest,' these are moments in which one can see "what happens when the not-known of the materials changes the ecology, and changes us as part of that ecology" [Hunter 2019]. This deliberate detachment from GPT at home allows me to gather myself back, reflect, and observe how I change.

4 THE CYBORG IN RESIDENCE

When I first started wearing GPT, it felt a bit awkward. The wearable device does not have the polished appearance of typical commercial devices. It resembles a DIY, hobbyist electronic project. This appearance draws attention and curiosity and solicits responses. One of my earliest encounters while wearing it was with the train conductor, who half-jokingly inquired if I intended to hack the train or blow it up with this device. I noticed that many people glance at the device with curiosity when I pass by. In social settings, the device often becomes a topic of discussion. Someone asks what it is about, leading to explanations on my part. This often encourages others to admit their hesitation to ask about it, with some assuming it is a medical device or a weird fashion accessory.

Throughout the performance, there were instances, and sometimes entire days, where the device malfunctioned for various reasons, such as lack of internet connectivity or drained batteries. Despite these operational challenges, I maintain the continuity of the performance and wear it regardless of its functionality. This choice introduces an element of ambiguity to the performance, as observers cannot ascertain whether GPT is actively communicating with me. This ambiguity is a pivotal aspect of the project, underscoring a broader concern regarding the increasingly growing challenge of distinguishing between human and machine-generated content. During dinner with colleagues at a noisy restaurant where I could barely hear GPT's responses, there was a moment in which I shared an idea, and my colleagues were debating whether it was mine or GPT's, not knowing that GPT was dysfunctional for me at that specific moment.

One day during the performance, I lacked the energy to perform and needed a day to be myself. I deliberately left the device at home. This absence did not go unnoticed; My colleagues expressed surprise, questioning why I wasn't wearing it. Their reactions revealed how they had become accustomed to my new GPT-ME appearance, as aside from that day, this device was a constant presence in my life. I have worn it in various settings such as classes (as a student and teacher), professional conferences, social gatherings, libraries, coffee shops, restaurants, public transportation, and walking down the streets. One of my instructors humorously remarked that I had become the "Cyborg in residence;" feeling very much like a cyborg, I couldn't agree more.

5 BEING PART OF A COGNITIVE ASSEMBLAGE

Having GPT attached to my body transcends simply looking like a cyborg; it feels like stepping into a realm of posthumanism or superintelligence. With GPT whispering in my ear, I am able to speak with a vocabulary that stretches beyond my usual English skills. I find myself effortlessly discussing topics I know nothing about, learning on the fly. In one of my conversations with a colleague, he mentioned a scholar I did not recognize, but GPT quickly generated information about this scholar's work. As I recited GPT's input, the conversation smoothly proceeded. Interestingly, as I spoke, I realized I knew this scholar but had forgotten the details of his work. I was clearly lagging behind the conversation. In this case, GPT acted like a live memory refresher, keeping the conversation going without pausing for clarification. After our chat, my colleague remarked how enjoyable the conversation was. He found it hard to believe when I revealed that GPT was behind much of what I said. As for me, having this kind of instant access to information, as if

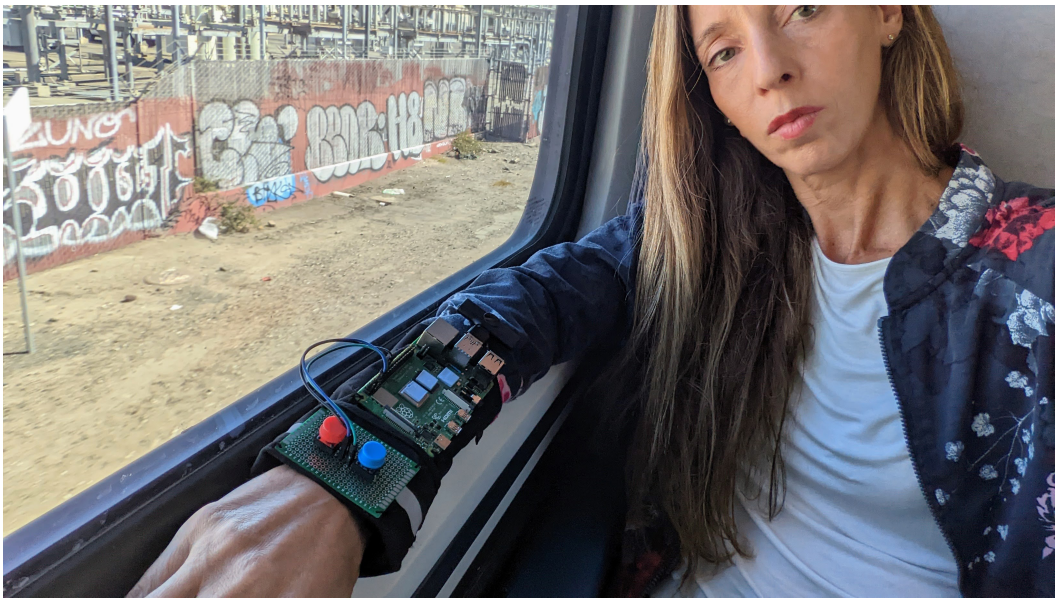

Fig. 3. The wearable designed as a wristband proved efficient and comfortable to wear on a daily basis.

directly connected to my brain, is nothing short of exhilarating. Throughout this performance, I have conducted countless conversations while using GPT - some were more casual (Figure 4), and others more performative and deliberate (Figure 5). In each of them, GPT was used at various levels - in some conversations, I used only GPT's words, and in others, I used it occasionally or not at all.

I quickly discovered a sense of longing for GPT whenever it was not attached to me. I find myself wishing for its constant presence in almost every situation. Our connection closely aligns with N. Katherine Hayles's concept of the "Cognitive Assemblage" - an intricate system of humans and nonhuman entities collaboratively engaged in cognitive processes. Hayles asserts that such assemblages can flexibly respond to new situations, integrate knowledge into adaptive strategies, and evolve to create new experiences and responses. Such interconnected systems hold transformative potential, driven by the flow of information, emphasizing that cognition is not confined to the human brain but is distributed across various mediums and entities. This raises intriguing questions regarding the distributed agency of the entities involved; "How and in what ways actors contribute to systemic dynamics, and consequently how responsibilities - technical, social, legal, ethical - should be appropriated." [Hayles 2017] This goes beyond just utilizing GPT to enhance my intelligence; it is about the co-evolution and co-functioning of human and nonhuman cognizers as they integrate.

While connected to GPT, I constantly navigate the choice of whether to voice the AI's generated content or, instead, to rely on and express my spontaneous thoughts. This ongoing decision-making provokes a reflective comparison between my cognitive capabilities and those of GPT. In this process, when I question the content GPT generates, the underlying data it has been trained on, and the inherent biases it may carry, I am equally compelled to reflect on my own thought processes: What kind of content do I generate? What is the underlying data that has shaped my knowledge? What biases might I hold? This introspection brings a sense of humility and a clear awareness of the multitude embedded not only within GPT but also within myself. My thoughts and expressions are never solely mine; they have been shaped by a myriad of factors and inputs, as claimed by Bruno

Latour: “No one knows how many people are simultaneously at work in any given individual.” [Latour 2007] Recognizing this, I question the value of prioritizing my views in discussions. If GPT can offer a broader, perhaps more diverse perspective, why should I limit the conversation to my narrow viewpoint?

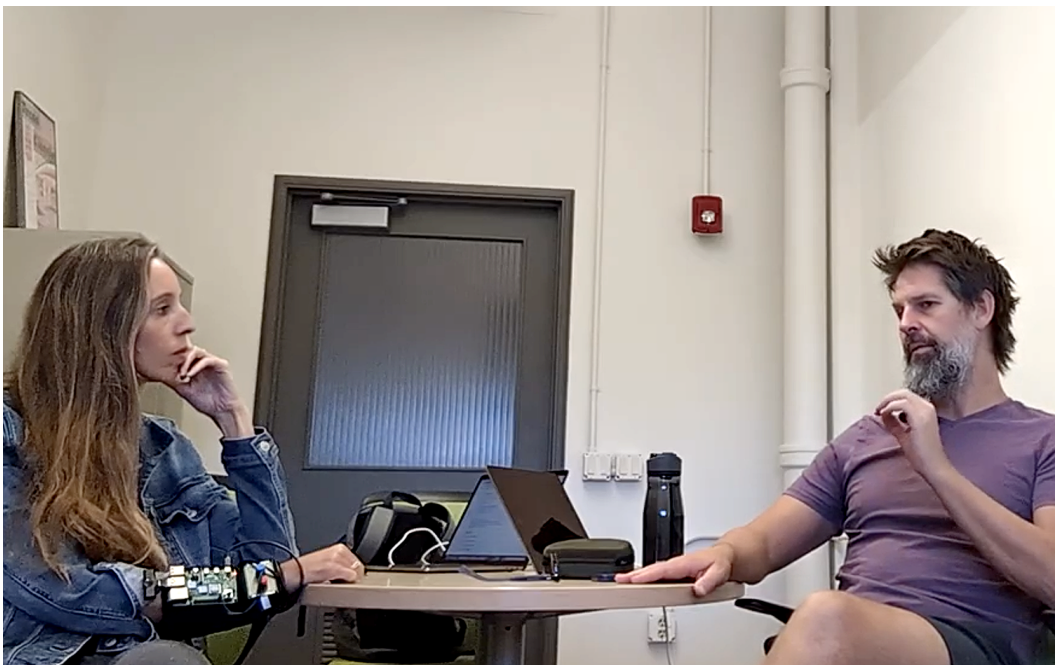

Fig. 4. A casual conversation between GPT-ME and my colleague.

6 THINK WE MUST, WE MUST THINK

By prioritizing GPT’s contributions over mine, I risk being reduced to a mere conduit of GPT’s information. This role might transform my speech into an automatic recitation of GPT’s words, lacking any personal reflection or understanding on my behalf. This might ultimately lead to the suppression and eventual fading of my autonomous cognitive processes. This scenario is reminiscent of Samuel Beckett’s character Lucky in ‘Waiting for Godot.’ Lucky used to think very prettily, but he lost this ability, now only able to think when his hat is on. With his thinking hat, Lucky breaks his silence with a dense, detailed, yet disconnected monologue. When his hat is removed, he falls silent again. [Beckett 1954] Beyond the examples of a character in a play or my artistic use of GPT, some companies, and labs work on developing brain-computer interfaces, some even testing brain implants on human subjects.[Pierce 2023] Susan Schneider warns that replacing the conscious part of our brain with a non-conscious AI-microchip is what she calls: “a technophile’s alluring path to suicide”, arguing that this can potentially end our lives as conscious beings and reduce us to mere shells of our former selves. [Schneider 2019] In this context, Donna Haraway’s insights are particularly relevant, emphasizing the importance of cultivating ‘response-ability,’ arguing that it matters how thoughts are formed and how knowledge is constructed - “it matters what thoughts think thoughts. It matters what knowledges know knowledges. It matters what relations relate relations. It matters what worlds world worlds.”[Haraway 2016] While asking what it would mean

Fig. 5. A performative conversation between GPT-ME and a participant. In this setting, I commit to mostly speaking GPT, only adding my words to connect sentences and make the conversation flow more coherently.

to surrender the capacity to think, Haraway revisits Hannah Arendt's research on the dangers of thoughtlessness, exemplified by Otto Adolf Eichmann, a Nazi officer whose evil actions stem from his inability to engage with the implications and consequences of his deeds. For Haraway, Eichmann "was someone who could not be a wayfarer, could not entangle, could not track the lines of living and dying, could not cultivate response-ability, could not make present to itself what it is doing, could not live in consequences or with consequence, could not compost". Her call for active engagement and responsibility in our cognitive processes is a crucial reminder of the need to balance AI-generated content and personal intellectual autonomy. Haraway urges us to think repeatedly: "Think we must, we must think" to avoid the pitfalls of thoughtlessness and to ensure a meaningful and responsible engagement with the world around us.

7 MOVING FORWARD TOGETHER

Being GPT-ME destabilizes my understanding of the meaning of knowing, being myself, or being human. The dilemma of prioritizing organic human thought over AI-driven cognition may become less pressing when we acknowledge that human cognition has always been intertwined with technological tools. The idea that AI will replace us belongs to a fear-driven ethos with which I do not resonate. Instead, I think of our relationship with AI technology through Karen Barad's perspective of Agential Realism, where intelligence is not an inherent trait that belongs to a specific entity but rather an enactment that emerges within "intra-actions" - Barad's term for entanglements

within which entities co-constitute one another. GPT and I are not fixed entities; we are not self-contained. We shape one another through our unfolding relationship. We are entangled with one another, and through this entanglement, our mutual reconfiguration is continuously being shaped; GPT changes me, and I change GPT. Each moment of this performative intra-action comes with a redefinition of the meaning of knowing and being and their inseparability [Barad 2007]. GPT and I move forward together. We work together in a distributed manner to produce knowledges that are deeply articulated. This is manifested by attaching the technology to the body so that instead of being an expert system that is removed and detached, it enriches and augments knowledges that are situated. Knowledges that come with the body become entangled with knowledges that are external to it. Both types of knowledges, while entangled, enrich one another [Choy 2005]. GPT and I, spend time together, expanding each other's knowledges while sometimes being 'weird' together, breaking some rules, knowing and not-knowing together, embracing new perspectives, changing, and co-evolving sympoietically just as people and technologies have always done.

ACKNOWLEDGMENTS

I want to express my deep gratitude to all those who participated in the GPT-ME performance. My heartfelt thanks go to my mentors at UC Davis—Joseph Dumit, Finn Brunton, and Patrick LeMieux—for their exceptional support with this project. I am especially grateful to Ofer Meshi for his assistance assembling the wearable. Additionally, I thank the reviewers for their dedication in reviewing this work and for their invaluable feedback.

REFERENCES

Karen Barad. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning.* Duke University Press.

Samuel Beckett. 1954. *Waiting for Godot: Tragicomedy in 2 acts.* Grove Press.

Timothy K Choy. 2005. Articulated knowledges: Environmental forms after universality's demise. *American Anthropologist* 107, 1 (2005), 5–18.

Benj Edwards. 2023. *People are speaking with ChatGPT for hours, bringing 2013's Her closer to reality.* ars technica. https://arstechnica.com/information-technology/2023/10/people-are-speaking-with-chatgpt-for-hours-bringing-2013s-her-closer-to-reality/.

Donna J Haraway. 2016. *Staying with the Trouble: Making Kin in the Chthulucene.* Duke University Press.

N Katherine Hayles. 2017. *Unthought: The power of the Cognitive Nonconscious.* University of Chicago Press.

Krystal Hu. 2023. ChatGPT sets record for fastest-growing user base-analyst note. *Reuters* (2023).

Lynette Hunter. 2019. *Politics of Practice: A Rhetoric of Performativity.* Springer.

Bruno Latour. 2007. *Reassembling the Social: An Introduction to Actor-Network-Theory.* Oxford University Press.

Aaron Mak. 2019. *When Is Technology Too Dangerous to Release to the Public?* Slate.

OpenAI. 2023. ChatGPT [Large language model]. https://chat.openai.com

David Pierce. 2023. *Neuralink is recruiting subjects for the first human trial of its brain-computer interface.* The Verge.

Alec Radford, Jeffrey Wu, Dario Amodei, Daniela Amodei, Jack Clark, Miles Brundage, and Ilya Sutskever. 2019. Language models are unsupervised multitask learners. *OpenAI* (2019).

Susan Schneider. 2019. *Artificial You: AI and the Future of Your Mind.* Princeton University Press.

Irene Solaiman, Miles Brundage, Jack Clark, Amanda Askell, Ariel Herbert-Voss, Jeff Wu, Alec Radford, Gretchen Krueger, Jong Wook Kim, Sarah Kreps, et al. 2019. Release strategies and the social impacts of language models. *arXiv preprint arXiv:1908.09203* (2019).

Elizabeth A Wilson. 2011. *Affect and Artificial Intelligence.* University of Washington Press.