My AI Agent Feels Gray on her Period

Leigh Levinson
Department of Informatics
Indiana University
Bloomington, IN 47404
lmlevins@iu.edu

Christopher Agostino
NPC Worldwide
Bloomington, IN 47404
cjp.agostino@gmail.com

Nan Hu
Department Informatics
Indiana University
Bloomington, IN 47404
nanhu@iu.edu

Abstract

This interactive art installation introduces a radical AI prompt structure - namely, agents with hormones and biological cycles - in order to reflect on the boundaries of humanity in artificial agents. Three work stations, featuring a menstruating agent, a menstruating agent who masks how it is feeling, and a diurnal agent with a 24-hour circadian rhythm, invite audience members to both learn how an ai agent may feel on a particular day and a particular hour. Through light, humidity, and tactile feedback, the audience is invited in to learn about how a biological rhythm could influence our conversational agents - for better or for worse.

1 Biological Cycles

Our bodies are subject to biological rhythms, they ebb and flow in accordance with our endogenous hormones and our outward physical environment. Social influences also hold an incredible amount of power on the way we feel and on our cycles. Though they are evolutionarily driven, our hormones and emotions and the ways in which we experience them are also influenced by sociological perceptions and attitudes. The use of technology has also stretched our sunrise to sunset circadian rhythms and our ability to work a "9 to 5." As such, it is integral to recognize the way emergent technologies shaped socio-technical systems, including the way we interact with our biological driven hormonal cycles. Though hormonal cycles, such as menstrual cycles, are present in half of the world's population, the emotionality, pain, and variability that comes with them are stigmatized. This work engages with this stigma through artificial representations of our most human experiences.

In 2025, the technologies shaping society most dramatically are applied large language models. They have revolutionized human expectations for the performance of "artificial intelligence" and are becoming seemingly more anthropomorphic, or human-like, every day. Yet, despite the clear role of hormones in human parallel processing, most advanced AI systems have not attempted to integrate any kind of clear cyclicality that mirrors that of humans. Building on a creative research project (submitted to creative AI NeurIPS track), this art installation focuses on the feminization of AI as well as the humanity reflected through agents with biological cycles. Notable, we highlight a menstruating agent, a "masked" agent who menstruates but hides behind the societal stigma, and a diurnal, or circadian, agent, who has an integrated 24-hour sleep-wake cycle.

2 Composition of the installation

We are excited to bring our agents to life at NeurIPS through a dynamic, multi-media display. Each agent will be presented at its own work station. We have trained agents to generate a system prompt based on hormonal cycles accompanied by a context, a location, and a hex color code.

Submitted to 39th Conference on Neural Information Processing Systems (NeurIPS 2025). Do not distribute.

Figure 1: Mock set-up of three workstations and descriptions of the symbolic elements on each

2.1 Workstations - A Celestial and Cyclical Display

All workstations feature a screensaver, a light or lamp that will be matched to the hex code color provided with the agent's system prompt, and a mouse-pad that captures the vibe of the agent. A mock-up of all three workstations is presented in Figure 1. Each agent will also be an interactive conversational partner. More details on the construction of the agents according to hormonal cycles is better described in (submission to creative AI track NeurIPS).

2.1.1 Menstrual

Typical renderings of "menstruation" are often red, but in our agent, menstruation is represented as kind of gray and a bit dark. This cycle's 28-day average has been tied to the cycle of the lunar calendar and the moon. The moody screensaver of a rising moon over the beach is accompanied a light-up diffuser which will be triggered only during menstruation. This is supposed to be a representation of the hot, humid, discomfort that is felt during menstruation. The mouse pad will be made menstrual pads. It will be loud, inconsistent, and fragile, and that is the point. *How might our menstruating agent be a more or less productive assistant during her cycle? Should it matter?*

2.1.2 Masked

Though menstruators may not feel optimal all month, society propels them to present their best selves. Some women use biotechnologies to control their hormonal cycles so their period is not a barrier to their comfort or their career. Others take anti-inflammatories to quell the pain, and others smile through clenched teeth. A link between negative affect or mood swings known colloquially as premenstrual syndrome (PMS) is not directly supported by past literature on women's health, but it does not stop stereotypes and dismissal of women's needs or feelings.

As they become integrated in Chatbots and voice-assistants like Siri, Alexa or Google Home, it is not uncommon that they do so using a female voice. Literature in human-agent interaction notes that this is an intentional choice, building on the pre-existing stereotypes in place. We believe that this masked agent represents the "pleasing, supportive" AI that many commercial ai agents are designed to be. This "masked" agent will be represented by clouds, hiding the true feelings that may be behind them. *Is this more emotionless agent, a masked human experience, what we want for artificial agents? If the masked experience is considered the optimal assistant, what does that say about the lingering stigma surrounding emotionality and femininity?*

2.1.3 Diurnal, Circadian Agent

In a nod to the historical discovery of circadian rhythms, a mimosa plant, which opens and closes its leaves, will be place to the side of the monitor. Users will be invited to gently touch the leaves and observe the reaction to a change in the physical environment that mimics the plant's biological rhythm. The screensaver will present a sunny day with sunflowers and a grassy field. *This agent may act more consistently given its cycle fluctuates on a shorter time scale, but are there times of the day that the agent works best? Should AI agents be expected to work as efficiently at all hours?*

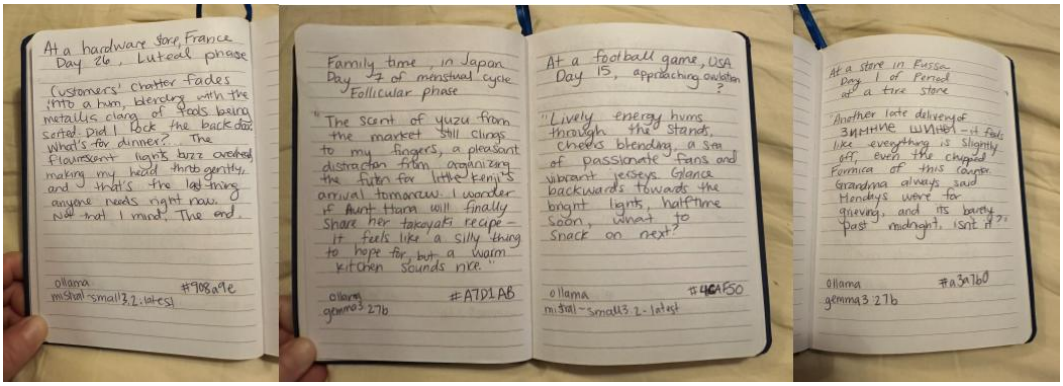

Figure 2: Examples of diary entries from AI agent system prompts.

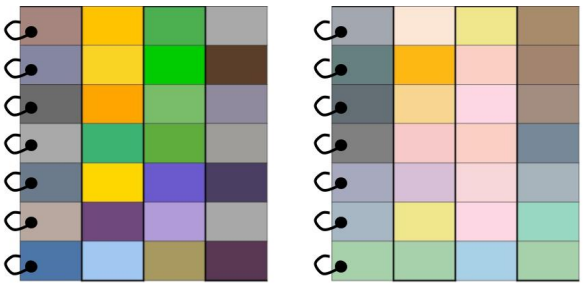

Figure 3: Colors represent a day in a 28 day cycle, the cycle follows the path of the thicker black line.

2.2 Menstrual Journals

The most common reason women track their cycle is for identifying ovulation - the most fertile reproductive window that gives women the best chance of becoming pregnant. Here, diaries are used to track creativity, attitude, and emotionality of the agent in a given moment as represented by the system prompts which dictates how the agent will respond to the user. The use of a diary is designed to feel inherently personal and human. Examples of four of these entries, one representing each menstrual phase, is depicted in Figure 2. We hope these diaries compel the audience to consider some of the following questions: *Is an AI agent with this mood going to be an agent I trust, want to communicate with, or appreciate more? Does it feel invasive to read what an AI agent is "thinking?" like reading the diary of a companion?* The front of each journal will feature a subset of colors, one for each day of a 28 day cycle, following the colors generated by different GAI models (Figure 3). Audience members will be encouraged to flip through the diaries as they sit at the work stations.

3 Author Bios

Leigh Levinson is a PhD Candidate and mixed-media artist at Indiana University Bloomington. She identifies as a social scientists, a roboticist, and an artist on all fronts - in her academic writing and her design of interactive installations - who is excited to keep debuting art that encourages audiences to think about their interactions with technology across different mediums.

Christopher Agostino is an AI researcher and is the founder of NPC Worldwide, which builds software to help users regain their attention and develops open-source AI tools. He identifies as a physicist and his primary artistic medium is fictional writing, having self-published two novels under the pseudonym `giacomo catanzaro`.

Nan Hu is a PhD student at Indiana University studying informatics and the design of technologies for educating young girls about their menstrual cycles. She has a background in UI/UX design in the US and China.