Generative AI as a Catalyst for Transformative Experiences

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The rapid advancement of Generative AI (GenAI) technology offers unprecedented opportunities for creating deeply personal, impactful, and novel interactive experiences. Its capability to generate photorealistic content with increasing speed and sophistication, coupled with the ability to create almost infinite variations "on the spot" and dynamically control content creation, paves the way for new kinds of interactive systems. These systems can create interactive experiences that are unique yet easily fine-tuneable, and capable of tailoring visual content for each individual viewer. Furthermore, such systems offer the potential to create deeply personal and engaging experiences that could facilitate transformative states. This endeavor aligns with the notion of intentionally facilitating transformative experiences, a concept central to the re-emerging ethos of Cyberdelics, which posits that technology can produce experiences of awe, transcendence, empathy, and bliss, rather than robbing users of their sense of presence, promoting fear of missing out (FOMO), anger and envy. While previous research on inducing awe has often relied on non-interactive stimuli such as natural imagery, there has been a notable absence of empirical studies investigating interactive systems that leverage personalized, real-time content.

In line with this growing interest in utilising emerging technology as a catalyst for transformative experiences, this study contributes to the ongoing discussion by empirically exploring how an interactive installation can facilitate such profound encounters. The primary purpose of this research is to investigate whether GenAI-augmented self-reflection can serve as an effective and novel source of aesthetic awe. To achieve it, this experimental study combines approaches from visual arts, the unique affordances of GenAI technology, the philosophical underpinnings of Cyberdelics, and empirical methods from psychology in human-computer interaction.

At the core of the research is a digital mirror installation that augments the viewer's reflection in real-time. The installation incorporates four distinctive scenarios, each based on devised design strategies for facilitating awe experiences and differing in how GenAI dynamically transforms and augments the viewer's self-reflection. This installation was tested with a total of 40 participants across two independent experiments: one conducted in Riga, Latvia, and the other in Tampere, Finland. During these experiments, comprehensive data was collected, including participants' emotional responses via validated self-reporting scales and objective physiological measures through brain activity recordings using an EEG headset.

The experimental results confirm that GenAI-augmented self-reflection can indeed serve as a potent visual stimulus for inducing transformative experiences and aesthetic awe. Furthermore, the study reveals significant positive correlations between specific personality traits and the intensity or degree of awe reported by participants. By developing and testing a GenAI-powered interactive installation that offers real-time augmentation of the viewer’s self-reflection, the present study uniquely investigates how such deeply personal experiences can be intentionally designed for. The findings underscore the capabilities of real-time GenAI for individual personalization, a feature previously unfeasible in this context, and highlight the significant opportunities arising from the synthesis of artistic approaches and emerging technology to design for novel experiences that promote positive psychological states.

Keywords

generative ai, transformative experiences, cyberdelics, interactive installation