Problematizing Creative Work In The Age Of Generative AI

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TREO Paper

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Abstract

Exploring the transformative impact of Generative AI (GenAI) on creativity, this research aims to investigate the emerging field of human-computer "co-creativity." Historically, creativity was seen as an inherently human trait, with technology merely facilitating it. However, GenAI's advancements challenge this notion, offering both the potential to enhance human creativity and concerns over diminishing creative abilities due to reliance on AI. This study investigates how human-GenAI interactions, conceptualized as dialogues initiated by human prompts followed by GenAI responses, can reshape creative work processes and outcomes. Focusing on business professionals and GenAI interactivities, this research employs conversation analytics and thematic analysis to better understand the dynamics of these interactivities. This study will contribute to the research addressing the integration of GenAI in creative tasks, the dual aspects of GenAI's impact on creativity, and the future of human-AI collaboration in creative tasks.

Keywords: Generative AI, Creative Work, Prompt Engineering

Extended Abstract

Building on the foundation of AI-driven innovations, Generative AI (GenAI) is emerging as a powerful subset of artificial intelligence, offering immense capacities to transform work (Brynjolfsson et al., 2023). GenAI models can create new content by learning patterns and structures from existing data. These models, such as the GPT series developed by OpenAI, use complex algorithms to analyze the relationships between various elements in the data, enabling them to generate outputs increasingly perceived by humans as original and creative (Guzik et al., 2023). GenAI technologies have the potential to automate and augment tasks that require creativity and problem-solving (Brynjolfsson et al., 2023). Therefore, roles centered on content production—such as writing, image creation, coding, and other tasks traditionally demanding a high level of knowledge and expertise—now seem likely to be uniquely affected by GenAI (De Cremer et al., 2023).

Creativity is the generation of novel and valuable ideas concerning new products, services, and approaches to doing things (Zhang et al., 2020). Employee creativity has been commonly viewed as a necessary foundation for organizations, vital in increasing productivity and, thus, organizational performance (Anderson et al., 2014). Information Systems (IS) researchers have devoted efforts to investigating how to facilitate individual creativity, paying particular attention to the role of digital technologies. Extant research shows that these technologies help employees achieve high levels of creative problem-solving by supporting the acquisition of domain-related knowledge/information (Gray et al., 2011), enacting interconnectivity, immediacy, and cue communicability (Fuchs and Reichel, 2023) and by providing cognitive stimuli (Minas and Dennis, 2019) and digital feedback (Wong et al., 2021). In much of prior research, creativity has been predominantly regarded as a uniquely human attribute (Carruthers, 2013), with technology supporting its facilitation. In the context of AI, recent studies suggest that AI systems can enhance employee creativity, leading to what is termed "AI-

augmented creativity" (Jia et al., 2024). Nevertheless, advancements in GenAI are fundamentally transforming our understanding of creativity and the nature of creative work (Tredinnick and Laybats, 2023). Accordingly, a research stream focusing on human-computer "co-creativity" is emerging (Muller et al., 2022). The increasing abilities of GenAI to carry out creative tasks has raised questions regarding the redefinition of creative work, highlighting a need to examine the technology's implications for the future of knowledge and creative work (Benbya et al., 2024). Recent research shows that GenAI can facilitate human creativity by augmenting human capabilities. For example, GenAI might facilitate identifying insights not readily apparent to human decision-makers to serve as stimuli for novel ideas, encouraging employees to explore new avenues for innovations (Brea and Ford, 2023). However, there has also been an ongoing debate surrounding the potential detrimental effects of AI on employee creativity. Critics argue that the increasing reliance on AI-driven solutions may diminish human creative abilities in the long run (Ford, 2015). The primary concern is that overdependence on AI technologies might reduce human engagement with creative tasks, ultimately resulting in a decline in creative thinking and problem-solving skills (Brynjolfsson and McAfee, 2014). Past research has emphasized the importance of human-AI collaboration, demonstrating that through such partnerships, humans and AI can enhance each other's complementary strengths, such as leadership, teamwork, and creativity (Wilson and Daugherty, 2018). Building on the existing discourse, which highlights the dual aspects of GenAI's influence on creativity—the augmentation of human capabilities and the concerns over potential negative impacts on human creative processes—the current study seeks to investigate the dynamics of human-AI interactivity in the context of creative work. In particular, we aim to address the following research question: *How and under what conditions can human-GenAI interactivities alter creative work processes and enhance creative outputs?*

To address our research question, we conceptualize these interactivities as *conversations* between humans and GenAI, where humans initiate the conversation by issuing prompts to GenAI, followed by the GenAI generating responses. To empirically investigate human-GenAI *conversations*, we plan to collect data from business professionals engaged in a task using GenAI tools to develop innovative business model ideas. Each participant's deliverable will consist of three parts: First, records of all prompts and the GenAI responses, providing first-hand evidence of how generative AI tools are actively employed in creative tasks. Second, a detailed description of the proposed business model, serving as a measure for assessing the nature and quality of creative outputs, focusing on aspects such as novelty, feasibility, specificity, impact, and workability (Eapen et al., 2023). Third, a reflective essay discussing participants' experience with GenAI in accomplishing the task, giving insights into their perceptions of interacting with GenAI tools. Additionally, we incorporate publicly available data, including documented use cases of GenAI prompting, to further enrich our analysis and deepen our understanding of human-GenAI interactivities in the context of creative tasks.

We will employ different approaches for data analysis. Since the first data component (i.e., prompts and responses) in our dataset primarily comprises conversations between humans and GenAI, we intend to conduct *conversation analytics* to explore and identify patterns and styles of human-GenAI conversations (Chen et al., 2023; Hepburn et al., 2012). For the second component (i.e., business model descriptions), we adopt the "theoretical" (or deductive) thematic analysis approach (Braun and Clarke, 2006). In theoretical thematic analysis, themes (i.e., repeated patterns of meaning) are generated through an iterative process aligned with researchers' pre-established theoretical or analytic interests stemming from their engagement with the literature prior to analysis (Braun and Clarke, 2006). In our study, we, thus, rely on established conceptions and criteria of creativity found in the literature to assess the creativity level of business model descriptions. Finally, for the third component, data analysis will be conducted through the inductive thematic analysis approach, where specific themes are generated through an iterative process of searching for, reviewing, defining, and naming "repeated patterns of meaning" (Braun and Clarke, 2006). Additionally, we compare and contrast the content of the business model descriptions with the GenAI responses to further examine aspects of human-GenAI "co-creativity."

This study aims to contribute to the scholarly understanding of GenAI's role in creative tasks, exploring the complexities of optimally integrating human and artificial intelligence in the creative process. We

also aim to contribute to the literature on prompt engineering, a practice that involves crafting inputs or instructions to guide GenAI systems towards generating responses that effectively address specific tasks.

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