Comprehending how artificial intelligence and human creativity work to benefit the future of interior design; challenges risks, pros and cons

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Abstract:

In the era of advanced technology, artificial intelligence and human creativity are becoming core elements for the development of the interior design field. This study aims to examine how artificial intelligence works and its impact on creativity in interior design, focusing on the benefits and challenges associated with such integration. Artificial intelligence is known for its ability to simulate human cognitive processes such as learning and thinking, and is used in various fields that require complex decision-making. It stands out for its machine learning capabilities and big data processing capabilities to create innovative and personalized interior designs. Human creativity, on the other hand, is considered the driver of design originality and innovation. Creativity involves the ability to think outside the box and come up with unique solutions to design challenges. The study looked at the convergence of artificial intelligence and human creativity, finding that while artificial intelligence can mimic some aspects of creativity, a designer's unique creative signature remains crucial to injecting spirit into a design. It highlights the challenges and risks associated with the use of artificial intelligence, such as concerns about dehumanization and its impact on the job market. Positive benefits include increased efficiency and the ability to quickly create complex and professional designs. Additionally, the study discusses the ethical issues of artificial intelligence in design and highlights the importance of developing policies to ensure responsible and ethical use of the technology. Finally, the study raises future expectations and posits that the fusion of artificial intelligence and human creativity will open up new horizons for interior design innovation while placing human values and authenticity at the heart of the design process. Research highlights that artificial intelligence is not a replacement for human creativity, but a tool to extend and expand its possibilities

Research Problem: The following questions can help identify the study's research problem: Is artificial intelligence an obscure process with unknown mechanisms? Is human creativity a process that occurs without relying on scientific steps? Can artificial intelligence and human creativity be merged?

Research Objective: To shed light on the simple mechanisms of artificial intelligence so that interior designers can recognize and understand what happens. To understand the mechanisms of human creativity in the field of interior design and furniture. To experiment with merging human creative mechanisms and artificial intelligence. To determine whether the same design can be obtained from artificial intelligence – is there a design signature?

Importance of the Research: This research gains its importance from the need to understand the changes that artificial intelligence can bring to design processes, and how designers can leverage these technologies to enhance creativity and innovation. Research Boundaries: The research will be limited to the use of artificial intelligence in interior design and furniture.

Research Methodology: The study follows: An inductive approach to scientifically understand the essence of creativity and innovation in artificial intelligence and human creativity. An applied approach through the use of artificial intelligence in generating interior designs for a specific area.

Research results Artificial intelligence is not entirely an obscure process; there are many known mechanisms and theories that form its basis. Human creativity can sometimes follow scientific steps, but it often includes unexpected and unstructured elements. The merger of artificial intelligence and human creativity is possible and can lead to innovative results in the field of interior design and furniture. So far, it is not possible to obtain the same design when entering the same textual data to describe the required on platforms generating designs using artificial intelligence. It is not yet possible to obtain architectural engineering horizontal and vertical projections and sections for interior design. Jobs will disappear and new ones will emerge due to artificial intelligence; we, the workers in the field of interior design academically and executively, must be prepared. Collaboration between artificial intelligence and human creativity can lead to innovations that would not have been possible by each on their own. Thus, artificial intelligence becomes a partner in the creative process, not just a tool. Human creativity is the element that breathes life into the design and makes it capable of communicating with humans and their design requirements in a deep and meaningful way. While machines can provide support in technical operations, the human creative touch will always remain the driving force behind innovation and excellence in the world of design. The more details required from artificial intelligence to generate designs, the more the artificial neural networks and algorithms connecting to data centers can increase the rate of mutual understanding and the feasibility of the resulting prototypes.

Recommendations: To enhance the general understanding of artificial intelligence mechanisms to enable designers to use these technologies effectively. To conduct more research on how artificial intelligence affects human creativity and vice versa. To develop design tools that benefit from the capabilities of artificial intelligence while maintaining the human creative touch. To explore the possibility of applying artificial intelligence in creating unique designs and determining whether they carry a distinctive "design signature." Not to be lazy and rely entirely on artificial intelligence, lest the day comes when we review ourselves when humans work for the machine. To emphasize that artificial intelligence should not be seen as a substitute for human creativity, but as a tool that enhances and expands its possibilities. To work on

developing more transparent and accountable artificial intelligence systems, enhancing awareness and education about the uses of artificial intelligence, and establishing laws and regulations that ensure data protection and privacy. It is also necessary to develop technologies that reduce energy consumption and minimize bias in artificial models.

Keywords:

Artificial Intelligence- Generative Artificial Intelligence- Human Creativity in Interior Design- Intelligence Ethics

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