Literary Creativity and Artificial Intelligence: A Comparative Approach

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ABSTRACT

Ancestries of human intelligence and conduct are traced back to the unique combination of genetics, upbringing, and exposure of human beings to various situations and environments. It entirely depends upon the individual's wisdom to illuminate and incubate new ideas to give new shape to the existing world. It is a cognitive ability that is inherently built in an individual to think, excavate, evaluate facts, and make additions to the existing ideas in the world. It facilitates new research and development and makes the world experience new technological horizons in all spheres of life. The purpose of human intelligence is to integrate and conglomerate a range of cognitive activities to adapt to new circumstances. It makes people use their memories, processing capabilities, and cognitive talents that their brains provide to them. Artificial intelligence is based on human insights by which a machine is discovered to actualise all kinds of work effortlessly. Artificial intelligence is structured rather than engaging in diverse sources of inspiration or conducting independent research. It obstructed the researchers' efforts to analyse and interpret the facts thoroughly and minutely to draw conclusions and develop new ideas to facilitate people's efforts to provide a big thrust to the economic development of their respective nations.

Keywords: Creativity, Human Intelligence, Technological Horizon, Artificial Intelligence

INTRODUCTION

If COVID-19 had not impacted us, what would our outlook towards implementing technological methods in the Indian education system? Probably the scenario would differ significantly, as the whole world was complacent with the available resources it had before the outbreak of the terminal pandemic in 2019.It exposed the economic standard and the preparation of all countries to face the vagaries of nature and woke them up to reconsider their economic policies of "Pseudo Development," which forced them to exploit natural resources that support human beings to live a healthy life.

The advent of the pandemic COVID-19 is just a warning of a potential catastrophe and has awakened the world to reconsider its preparedness to face such lethal pandemics in the future. It has truly brought about a technological revolution across the globe in all sectors of the economy. However, COVID-19 has forced all nations to have a harsh experience and bitter memories; it has awakened the world to reassess its developmental policies and take positive measures to streamline the information and technology sector to efficiently handle such impending disasters.

In the words of Daniel Kahneman on AI and human judgment**, "**AI has the potential to surpass human judgment in many areas, but it is crucial to understand that human intuition is shaped by years of evolution and experience."(Kahneman379) Artificial intelligence plays different roles and presents different challenges in various disciplines. Creativity is one such discipline where the use of artificial intelligence is always questioned and debated. The knowledge of artificial intelligence aims to replicate the human mind perfectly.

Creativity conventionally reflects human thought and intuition that arises from the unique and distinctive outcomes it generates. Creative writing seeks to engage, educate, and motivate its audience, whether through written or spoken forms. The utilisation of artificial intelligence in numerous aspects of life, specifically writing, brings about transformations and presents many challenges in the literary world. With the swift advancement of technology, artificial intelligence affects the creativity of authors. Thus, research on artificial intelligence in the contemporary sophisticated world has gradually become a significant subject.

Research Objective:
This objective of comparison based exploration is to find out the differences and similarities between Human generated creativity and Artificial Intelligence generated creativity and its impact on human creativity.

RESEARCH METHODOLOGY

Qualitative comparative analysis has been used to make comparison between Artificial Intelligence generated creativity on the parameters of four-staged model of Creativity given by Graham Wallace.

Creativity:
Creativity emanates from skill and imagination, and it is a useful tool for developing new ideas, increasing efficiency, and devising solutions to complex problems. Creativity skills can be learnt and developed over time. Defining the term creativity, Sternberg and Lubart in their seminal work, The Concept of Creativity: Prospects and Paradigms(1999), states, "Creativity is often defined as the ability to produce work that is both novel (original) and appropriate (useful). (Sternberg and Lubart 3). A human being can use imagination to generate new ideas. Any idea and expression that comes out of imagination and an individual's skill to bring new things that were not in existence in the world is termed creativity. It is possible in all spheres of life. It covers all aspects of human activities like the writing of stories, dramas, poems, and songs; scientific invention and discovery; performance in the fields of painting, music, dance, and sculpture; social and political relationships; business; teaching; and other professions. According to Guilford, "Creativity sometimes refers to creative potential, sometimes to creative production, and sometimes to creative productivity." (Guilford 171) Here creative potential means the personal disposition of the individual in which some more or less permanent qualities help him in creative thinking. Creative thinking leads to new ideas. Creative production means the process of productive thinking. It can be best defined as original thinking, new types of associations, divergent thinking and behaviour, new solutions to old problems, seeing or expressing new relationships, flexibility, and a new approach in different fields of life. As stated by Edward de Bono on creativity,"Creativity involves changing what is established to create something new, often requiring a new way of thinking and problem-solving." (de Bono 4) Thus, every idea or expression that is original to the creator is an example of creativity. Creativity is both a process and a product. It's a unique mental process that is accompanied by several mental abilities and personality characteristics. The creative person is always prepared to adopt new attitudes, ideas, or behaviors. Divergent thinking is the most important characteristic of creativity.

Causality between Pristine Creativity and Artificial Intelligence generated Creativity:
As in Bloom's taxonomy of learning model, creativity comes under higher learning. To achieve higher learning skills, the creativity model is very important to understand how artificial intelligence is helpful in this process of creativity and where it hampers the model of creativity. According to the traditional creativity model, there are four chief stages of creativity as; Preparation, Incubation, Illumination and Verification.

Graham Wallace first presented this four-stage model of the creativity in his book titles, The Art of Thought (1926). Here is a comparison between human-generated creativity and AI-generated creativity.

1. The preparations are in the fledgling stage of the creative process, and it refers to orientation to the problem. It is a period of conscious labour and anxious search. "Preparation, the stage during which the problem was investigated…in all directions…" (Wallace, 80). Thus, as explained by Graham Wallace, all the coherent facts of problems are collected, and redundant material is eliminated. The material and content that are produced by an artificial intelligence process during the preparation phase can limit the breadth and depth of research and exploration. The researcher relies heavily on pre-existing information in the artificial intelligence structure rather than engaging in diverse sources of inspiration or conducting independent research. In genuine creativity, the researcher incubates the facts he collects, which reflects the further efforts of the researcher to bring new things out to the world. However, artificial intelligence blocked the researcher's efforts to analyse and interpret the facts thoroughly and minutely to draw conclusions and develop new ideas to facilitate people's efforts.

2. Once all necessary information is gathered, it undergoes a period of incubation which is the second stage in the process of creativity. It means there is no conscious thinking about the problem. This stage is necessary mainly because it brings illumination and assimilates new ideas that are added to the existing and prevalent knowledge and experience. Whereas in Artificial intelligence generated creativity there is no such blockade in the process as it disrupts the natural process of incubation by providing off-the-rack knowledge, solutions, and suggestions.

3. Illumination and inspiration suddenly percolate immediately after incubation from the unfathomable depth of the mind of an individual. As Graham Wallace states, "…consisting of the appearance of the happy idea together with the psychological events which immediately preceded and accompanied that appearance, …is called Illumination." (Wallace, 80). Thus, it directly and effortlessly comes out through concentration. Many scholars have said that creative ideas strike in their minds during their joblessness period. Hence, illumination and inspiration are the results of the intellectual passivity of the scholars. Artificial intelligence generated creativity brings out ideas that have many flaws, like depth and originality. Ideas generated by artificial intelligence lack authenticity, originality, and depth as they provide solutions based on the existing facts and evidence of the pertinent subjects.

4. According to Graham Wallace, "Illumination was followed by a period of Verification, in which both the validity of the idea was tested, and the idea itself was reduced to exact form." (Wallace 81). Eventually, interpretation and verification are paramount factors, as inspiration and illumination are of no use if they do not stand the test of verification. It examines the validity of illuminated thoughts. Verification is a process of rethinking and reappraisal of the facts, owing to which new ideas are received and skeptical aspects of some ideas are clarified. It has been observed at the end of the discussion of hierarchical steps of natural creativity and artificial intelligence that the traditional process of creativity is more productive and significant to the overall growth of human races than artificial intelligence, as it only mimics human intelligence.

Analytical Explanation of the Comparison Study of Human-generated Creativity and AI generated Creativity:
Human intelligence in humans is a legacy of past experiences. It is completely dependent on the ability to change the environment through the special skills and knowledge gained by human beings. It includes characteristics such as creativity, intuition, and emotional intelligence. Human intelligence can adapt to new and unexpected situations while also considering ethical and moral aspects in decision-making. It appears to adapt to new situations by combining various cognitive processes. It represents the complex, multifaceted ability of human beings to learn from experience, adapt to new situations, grasp abstract concepts, devise creative solutions to problems, appreciate art, and use knowledge to manipulate the environment. It is a unique combination of genetics, experience, upbringing, and exposure to different situations and environments. Emotional intelligence, creativity, problem-solving skills, analytical power, and the ability to make connections are key features of human intelligence. Moreover, as Graham Wallace states, "In the daily stream of thought these four stages (of creativity) constantly overlap each other as we explore different problems." (Wallace 81) Therefore, it's not a static process it changes as per the demand of the situation and problem.

On the other hand, artificial intelligence is a creation of the human mind designed to imitate human cognitive functions and perform tasks that traditionally require human intellect. Artificial intelligence thinks and acts in a human-like and rational manner. It has had a significant impact on our daily lives. Its assessments are based on existing data collected by humans, making it exceptionally objective in decision-making. However, it lacks the ability to think abstractly and draw conclusions based on past experiences. It can only acquire knowledge from known and exposed materials. Artificial intelligence does not possess the innate cognitive and educational skills to explore new ideas and aspects of life, a capability that human beings demonstrate.

CONCLUSION

Therefore, the comparative study between Artificial Intelligence generated creativity and Graham Wallace's model of creativity which is also called the traditional method of creativity; reveals the primary distinctions in their functioning. Artificial intelligence –generated creativity is solely dependent on data and algorithms, whereas, human generated creativity is inspired by subjective experiences, emotions, and knowledge. Unquestionably, nothing can replace the human generated creativity. However, it wouldn't be correct to claim one is superior over another. Artificial Intelligence generated creativity has its own significance in certain specific fields as it saves time and fosters innovation. Indisputably, artificial intelligence, to some extent, galvanises an originality that stems from the creativity of the author and is unfailingly regarded as nectar of the human mind. Although artificial intelligence can analyse empirical evidence and literature and generate new ideas and content for writers, its utilisation in research and writing diminishes the authenticity and originality of its ideas. Such an approach certainly erases the idiosyncratic elegance of the writer, as it makes one utilise generic texts that are predominantly based on existing patterns. Algorithms can generate new ideas by analysing empirical evidence; however, they do not yet have an aptitude for "abstract thinking and imaginative engagement," which are both essential in any creative work.

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