

ETHICAL REFLECTIONS ON THE IMPACT OF ARTIFICIAL INTELLIGENCE ON HUMAN EPISTEMIC EMPLOYMENT OF CRITICAL THINKING

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ABSTRACT

The swift incorporation of artificial intelligence (AI) into diverse fields has generated substantial philosophical discussion concerning its influence on critical thinking. This essay examines, from a philosophical standpoint, how AI affects human cognitive functions, especially the ability to reason critically. By automating decision-making, redefining intellectual autonomy, and influencing information access, it investigates whether AI strengthens or weakens critical thinking, drawing on theories of epistemology and cognitive philosophy. Although AI systems increase productivity and offer extensive data processing capabilities, the study contends that they also run the risk of encouraging cognitive complacency, reducing reflective judgment, and reinforcing algorithmic biases. Conversely, by making it easier to access a variety of viewpoints and enabling sophisticated problem-solving, AI can be used as a tool to improve critical thinking. This ethical reflection highlights the necessity of ethical AI design and pedagogical strategies to ensure AI supports, rather than replaces, robust critical thinking in human cognition through a synthesis of philosophical frameworks, including Dewey's reflective thinking and Kantian notions of rationality.

KEYWORDS: Artificial Intelligence, Critical Thinking, Intellectual Autonomy, Cognitive Agency, Philosophical Reflection.

INTRODUCTION

“AI is likely to be either the best or worst thing to happen to humanity.”-

Elon Musk, CEO of SpaceX and Tesla

A revolutionary era has been ushered in by the quick development of artificial intelligence (AI), which has changed economies, industries, and social structures while raising important philosophical questions about its effects on the human mind and agency. A thorough analysis of AI systems' impact on critical thinking, a

fundamental component of human intelligence, is necessary as they develop from simple tools to complex agents with the ability to make decisions on their own. Critical thinking has long been considered a hallmark of human rationality, broadly defined as the capacity to analyse, evaluate, and synthesise information to form reasoned judgments (Paul and Elder 21). Yet, the way AI is being incorporated into everyday life—from decision-support tools to educational platforms, raises concerns about whether these innovations strengthen or weaken this crucial ability. From the standpoint of philosophy, this intersection challenges accepted notions of intentionality, autonomy, and the nature of thought itself, provoking contemplation on how environments mediated by AI alter the epistemic processes that form the basis of critical thinking. Both possibilities and risks for critical thinking have been brought about by the development of AI, especially in the form of generative models and machine learning algorithms. AI systems can, on the one hand, enhance human cognition by processing large amounts of data, identifying patterns, and providing predictive insights that humans might miss (Bostrom 109). AI-powered tools, such as automated research assistants and recommendation algorithms, for example, can speed up information retrieval and possibly promote better decision-making.

The pickup thought of the paper on the values and applications of AI systems made by Elon Musk shows its indispensable nature in the causes of the factors of development, but only and possibly limiting the capacity of human exercises of critical thinking in the causes of problem-solving modelling and civilisation (See, Afodu 169). However, the growing dependence on AI runs the risk of encouraging cognitive complacency, in which people may rely on algorithmic results without challenging their accuracy or biases—a phenomenon known as “automation bias” by some academics (Skitka et al 701). This conflict raises a philosophical question about whether AI can improve critical thinking or if it can act as a crutch that reduces thoughtful interaction with difficult issues. As reported in Suleyman and Bhaskar’s *The Coming Wave*, the AI systems are strongly imposing some relevance of problem-solving modelling, more effectively and adaptively, which the employment of human critical thinking is epistemologically and logically known for, and these are increasingly evident in all areas of development. According to Suleyman and Bhaskar, in ascertaining the fates of the human person with their presence aspects and facets of the world economies of values hinged on the values and employment of AI:

On the one hand, the potential benefits of these technologies are vast and profound. With AI, we could unlock the secrets of the universe, cure diseases that have long eluded us, and create new forms of art and culture that stretch the bounds of imagination. With biotechnology, we could engineer life to

tackle diseases and transform agriculture, creating a world that is healthier and more sustainable. But on the other hand, the potential dangers of these technologies are equally vast and profound. With AI, we could create systems that are beyond our control and find ourselves at the mercy of algorithms that we don't understand. With biotechnology, we could manipulate the very building blocks of life, potentially creating unintended consequences for both individuals and entire ecosystems (5).

Furthermore, the effects of AI on critical thinking have philosophical ramifications that go beyond pragmatic issues to include issues of ethics and epistemology. Since machine-generated insights make it difficult to distinguish between artificial and human reasoning, artificial intelligence (AI) challenges the conventional boundaries of knowledge production from an epistemological perspective (Floridi 45). Delegating decision-making to AI systems raises ethical questions regarding accountability and the loss of human agency, especially when algorithms are used in high-stakes fields like healthcare, education, and the law (Coeckelbergh 83). These concerns call for a critical analysis of how AI influences people's engagement with truth, evidence, and moral responsibility, as well as the results of their thoughts.

With the rapid advancement and growth associated with the employment of AI and it has been leading to significant exposure to various values of information and technological innovations and creativities, advancing the effectiveness of human activities. But, we should not be oblivious of its effects of human neglect and the undermining of the exercises of critical thinking in the presence of the applications of AI automated systems in value creation and development (Ohanedo 47). It seems that the act or exercise of serious critical thinking has been left to AI, automated reality. To examine how AI redefines the practice of critical thinking, this reflection integrates insights from technology studies, philosophy, and cognitive science. To determine whether artificial intelligence (AI) is a force for intellectual advancement or a possible danger to the deliberative abilities that characterise human rationality, this analysis will look at how human cognition interacts with artificial systems. The paper attempts to add to current discussions regarding how AI will influence human thought and agency in the future by using this philosophical lens.

THEORETICAL FRAMEWORK

As a framework for this conversation, critical thinking is described as “the intellectually disciplined process of actively and skilfully conceptualising, applying, analysing, synthesising, and/or evaluating information gathered from observation,

experience, reflection, reasoning, or communication, as a guide to belief and action” (Scriven and Paul 2). This definition highlights how critical thinking is based on logical investigation and is active, reflective, and independent. In terms of philosophy, critical thinking is consistent with Immanuel Kant's idea of *sapere aude*, which is the bravery to apply one's own knowledge without outside assistance (Kant 58). But AI creates a new dynamic in which reasoning processes are guided by external systems rather than by human mentors or texts.

Martin Heidegger's criticism of technology as a means of “enframing” (*Gestell*) offers a phenomenological lens through which to view the impact of AI. Heidegger contends that technology alienates people from their true selves by treating the world as a standing reserve that must be maximised (20). By putting efficiency and algorithmic solutions ahead of critical judgment, AI may, in this situation, “enframe” critical thinking. On the other hand, the pragmatist philosophy of John Dewey emphasises how technology can improve human inquiry when it is employed as a tool for experiential learning (161). To evaluate AI's dual role as a facilitator and a possible threat to critical thinking, this paper synthesises these viewpoints.

AI as a Challenge to Intellectual Autonomy

In contemporary society, artificial intelligence (AI) has become a disruptive force that is changing communication, industries, and decision-making procedures. AI has emerged as a transformative technology across numerous sectors, including higher education. With its ability to simulate human intelligence, AI redefines how institutions approach issues of growth, advancement, and development (Adebakin 1). AI presents enormous challenges to intellectual autonomy-the ability of people to think for themselves, critically assess information, and make well-reasoned decisions free from outside influence even though it also presents previously unheard-of opportunities for efficiency and innovation. Kant's focus on rational autonomy emphasises how crucial it is for people to make decisions using their logic rather than submitting to authority figures. He highlights thus: “All our knowledge begins with the senses, proceeds then to the understanding, and ends with reason. There is nothing higher than reason” (60).

AI systems run the risk of undermining this autonomy by presenting pre-processed conclusions that users might accept without question, especially those intended to optimise decision-making. For example, social media and YouTube recommendation algorithms select content according to user behaviour, resulting in echo chambers that suppress critical thinking and restrict exposure to different viewpoints (Pariser 112). As human exercise of critical thinking is being suppressed

by the human employment of AI automated systems for problem solving and developmental modelling, the fears of humans losing their essence or humanness may be lingering in many minds who want to be authentically humans, even in the face of ever-embracing and imposing values of technologies (Ohanedo 55). According to Suleyman and Bhaskar:

As technology proliferates, more people can use it, adapt it, shape it however they like, in chains of causality beyond any individual's comprehension. As the power of our tools grows exponentially and as access to them rapidly increases, so do the potential harms, an unfolding labyrinth of consequences that no one can fully predict or forestall.... Within decades, it has produced existential questions for humanity. As we have built systems of increasing power, this aspect of technology has felt more and more pressing to me. How do we guarantee that this new wave of technologies does more good than harm?

In this context, Heidegger's idea of enframing is especially pertinent. Through the reduction of complex phenomena to data points and probabilistic models, AI systems enframe knowledge. This reductionist strategy might deter users from asking thoughtful, open-ended questions, which are crucial to critical thinking. AI-powered search engines, for instance, may steer users toward preset conclusions by prioritising specific results based on opaque algorithms, which restricts their ability to consider different points of view. This relationship is consistent with Heidegger's caution that technology can obfuscate genuine comprehension by forcing a utilitarian framework on human cognition (27).

Critical evaluation is further complicated by the "black box" nature of many AI systems, where users are unable to understand the internal workings. People may find it difficult to evaluate the validity of an AI system if they are unable to comprehend how it comes to its conclusions, which could result in a type of epistemic dependence. This reliance calls into question the Kantian ideal of independent thought and poses moral dilemmas regarding how AI influences human attitudes and behaviour.

Epistemological Implications of Artificial Intelligence (AI)

The swift development of artificial intelligence (AI) has drastically changed the field of human knowledge and brought up important epistemological issues regarding how we gather, verify, and share knowledge in a time when intelligent systems are used increasingly. The field of philosophy known as epistemology, which studies the nature, sources, and boundaries of knowledge, offers a critical perspective for analysing how AI affects human comprehension. There are

significant epistemological ramifications for critical thinking when AI is incorporated into knowledge production because it entails assessing the validity and dependability of information sources, epistemology study of knowledge and justified belief essential to critical thinking. The epistemic landscape is altered by AI systems' creation and curation of knowledge. Large language models, such as Grok or ChatGPT, for example, combine data from various sources and present them as logical stories.

These AI achievements in epistemic modulation of the values of development of the individual and society in an automated civilisation of facts and contents have the potential to democratise knowledge access, but they also raise questions about the accuracy of AI-generated outputs, which could spread biases or errors present in their training data (Bender et al. 610). According to Suleyman and Bhaskar:

Today, AI systems can almost perfectly recognize faces and objects. We take speech-to-text transcription and instant language translation for granted. AI can navigate roads and traffic well enough to drive autonomously in some settings. Based on a few simple prompts, a new generation of AI models can generate novel images and compose text with extraordinary levels of detail and coherence. AI systems can produce synthetic voices with uncanny realism and compose music of stunning beauty. Even in more challenging domains, ones long thought to be uniquely suited to human capabilities like long-term planning, imagination, and simulation of complex ideas, progress leaps forward (10).

From an epistemological perspective, conventional ideas of justification are called into question by AI's capacity to generate knowledge. Knowledge is frequently described in classical epistemology as justified true belief, where justification is derived from empirical data or logical reasoning (Gettier 121). AI systems, on the other hand, use probabilistic models and produce results based on statistical correlations rather than deliberate reasoning. According to Floridi, artificial intelligence (AI) creates a type of "synthetic knowledge" that depends on computational efficiency rather than human cognitive processes (Floridi 45). This change forces a re-examination of what qualifies as legitimate justification for knowledge claims. Is a new epistemological category necessary for AI-generated outputs, which lack intentionality, or can they be regarded as knowledge in the conventional sense?

Integrating human-effective and adaptable employment of critical thinking in AI automated modelling of developmental values and relevance will present an essential and transformative approach to develop the societies and organisations that are humanly accommodating, based on the respect, protection, and promotion of

human rights and dignity (cf. Afodu 180, Ohanedo 58). AI calls into question established ideas of epistemic authority from a philosophical standpoint. In the past, authority was derived from human experts, organisations, or writings whose veracity could be evaluated using predetermined standards. However, AI brings with it a new kind of authority that is shared by developers, datasets, and algorithms. This change makes it more difficult for critical thinkers to assess sources because it is frequently unclear where AI-generated knowledge comes from. Furthermore, human cognitive capacities may be overwhelmed by the volume and speed of AI-driven information delivery, resulting in a cursory understanding of complicated subjects.

A counterargument is provided by Dewey's pragmatic epistemology, which holds that, when applied critically, AI can be incorporated into a reflective inquiry process. People can preserve their epistemic agency by viewing AI results as testable hypotheses rather than unquestionable facts. But this necessitates a degree of digital literacy and philosophical understanding that is not available to everyone, underscoring the necessity for educational systems to give critical thinking abilities top priority in the AI era. While concerns about authority and trust emphasise the interaction between ethics and epistemology, the opacity of AI systems and their potential for bias highlight the need for new epistemic standards. Philosophers, technologists, and legislators must work together to create frameworks that guarantee AI advances human knowledge rather than diminishes it as it develops. We can maximise AI's potential while preserving the integrity of our epistemic practices by addressing these epistemological implications.

Ethical and Societal Considerations

Beyond individual cognition, AI has wider societal ramifications when it comes to critical thinking. Because it allows people to assess policies, challenge authority, and participate in public discourse, critical thinking is crucial for democratic participation. However, these processes may be compromised by AI's impact on information ecosystems through polarisation, algorithmic bias, and disinformation. For instance, trust in common epistemic frameworks is undermined by AI-driven deepfakes and synthetic media, which make it difficult to distinguish fact from fiction (Vaccari and Chadwick 345). Hence, from an ethical standpoint, this calls into question the moral obligations of AI creators and users. Who is accountable for the results if AI systems influence critical thinking by selecting information or making decisions automatically? According to Kant's moral theory, which places a strong emphasis on personal responsibility, users must have control over decisions made by AI. However, this ideal is complicated by systemic factors,

such as unequal access to AI tools and education, since not everyone is equally prepared to handle the epistemic challenges of AI.

From the beginning on the adoption and adaptation of AI automated modelling of values and contents of knowledge, it was and is still pragmatically clear to the human persons as the real subjects of lived experiences and development that AI would be a powerful tool for extraordinary good but refused to admit to the impacts on the humanness of the human person, especially in the employment of the critical thing in the creation of values and contents of knowledge (Suleyman and Bhaskar 20). It is like most forms of power are being handed over to automated machines to sustain human values, not by humans themselves. It is showing one fraught with immense dangers and ethical dilemmas, as a web of self-destruction by humans who created the AI automated machines that are taking over them (Ohanedo 55). Ethically, human persons have long worried about not just the consequences and counter-relevance of advancing AI but where the entire technological ecosystem is heading, in response to and reference to the fate of human persons in the future. Beyond AI, a wider revolution was underway, with AI feeding a powerful, emerging generation of genetic technologies and robotic civilisations (See Afodu 180). In all, we should be well agreed of the fact that AI raises several complex ethical and social issues, including those pertaining to bias, privacy, autonomy, accountability, and inequality. Addressing these issues calls for a coordinated effort from developers, legislators, and society at large as AI continues to influence the modern world. Stakeholders can guarantee that AI is a tool for empowerment rather than oppression by placing a high priority on justice, openness, and inclusivity. To ensure that AI improves human well-being while respecting the values of justice and equity, the way forward is to strike a balance between technological innovation and ethical responsibility.

CONCLUSION

AI has both positive and negative effects on critical thinking. On the one hand, AI supports Dewey's idea of technology as an inquiry-facilitating tool by offering instruments for data analysis, personalisation, and intellectual inquiry. However, Heidegger's criticism of technology as enframing and Kant's emphasis on rational independence resonate with AI's challenge to intellectual autonomy and epistemic agency. The Kantian and Heideggerian ethics of development will remind us of the indispensable values of human rationality and reasonability in effecting the causes of development through the contents of human thinking and intelligence, and projects the understanding that the misuse of AI will necessarily spark up concerns

about its impacts on humanity, who are vulnerable to articulated artificially induced disorientation from the fundamental truth. People need to develop critical thinking abilities that allow them to question AI outputs, identify biases, and preserve reflective autonomy to manage this tension. Promoting digital literacy and ethical frameworks that value human agency is a shared duty among educational institutions, legislators, and AI developers.

From a philosophical standpoint, the emergence of AI challenges us to reevaluate what critical thinking is in a world where machine and human intelligence are becoming increasingly entwined. By recognizing many knowledge and epistemic systems, the AI automated modelling, considering its ethics and phenomenological essence, can move forward and beyond a more technocratic and pragmatic framework towards a more holistic, culturally responsive approach for the establishment of a knowledge claim, which will not undermine the humanness of the human person as the real agent of development. We can preserve *sapere aude* and guarantee that critical thinking continues to be a vital component of human flourishing by accepting AI as an instrument for inquiry rather than a replacement for reasoning.

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