

Contemplating Existence: AI and the Meaning of Life

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Abstract:

This article explores the intersection of artificial intelligence (AI) with existential philosophy, examining how AI technologies influence human conceptualizations of purpose and meaning. Despite rapid advancements in AI, the domain's implications for existential thought remain underexplored. By integrating interdisciplinary perspectives from psychology, philosophy, and AI ethics, this study elucidates how AI can shape, challenge, or enhance our understanding of life's purpose. It investigates theoretical frameworks and practical implementations of AI engaging in existential questions, analyzing both the capabilities and limitations of AI systems such as ChatGPT in simulating human existential thought. The ethical implications of AI's role in existential inquiries are also considered, highlighting concerns about transparency, bias, and socio-economic impacts. This research aims to bridge the gap between technology and philosophy, offering insights to guide responsible AI development and contribute to a more meaningful human experience.

Keywords: Artificial intelligence, Existential philosophy, Meaning of life, AI ethics, Human-AI interaction

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I. Introduction

The rapid evolution of artificial intelligence (AI) technologies presents significant challenges to traditional conceptions of intelligence and provokes profound questions regarding the essence of life and human existence. This article addresses the critical issue of how AI influences our conceptualization of purpose and existential meaning, an area that remains underexplored in both technological and philosophical literature. Existential meaning, a fundamental aspect of human experience, has been extensively studied within the realms of psychology and philosophy. Scholars such as Baumeister and Landau (2018) have identified four grand questions about meaning: its nature, effects, origins, and social dimensions. They argue that existential meaning involves purpose, value, mattering, continuity, and coherence, emphasizing the collective dimension's role in scaffolding personal meanings. Their work suggests that meaning is more often found than created, underscoring the importance of connecting with pre-existing frameworks of understanding (Baumeister & Landau, 2018). Similarly, King and Hicks (2020) have highlighted comprehension, purpose, and existential mattering as essential facets of meaning. Their review demystifies the construct of meaning, examining how it is measured, its correlates, and experiences that enhance it. Hvidt et al. (2021) have further categorized existential meanings into essential life meanings, spirituality/religiosity, and existential thinking. Their findings indicate that "the existential" serves as an overarching construct that includes secular, spiritual, and religious domains, which will be used to assess the broader implications of AI on existential meaning (Hvidt et al., 2021).

As AI systems become more integrated into various aspects of daily life, understanding their impact on human existential meaning becomes increasingly important. AI technologies possess the potential to shape, challenge, or enhance our understanding of life's purpose. Ethical reflections on AI, as discussed by Green (2018), introduce a crucial dimension to this research. Green's exploration of AI ethics addresses a spectrum of concerns, including transparency, bias, socio-economic inequality, and the moral implications of human de-skilling and dependency on AI systems. This study addresses the urgent need to explore these influences systematically, providing insights that are crucial for both technological development and philosophical inquiry. Additionally, Sedová (2020) emphasizes the increasing relevance of existential phenomenology in modern society, focusing on freedom and authenticity. This perspective underscores the contemporary interest in existential phenomenology as a means to navigate the complexities of meaning in today's world, which will be a critical lens through which this research examines AI's influence (Sedová, 2020).

This research adopts an interdisciplinary approach, drawing on insights from psychology, philosophy, and AI ethics. It examines how AI technologies influence the nature and sources of meaning in life, the ethical

implications of AI concerning existential questions, and the role of collective and individual experiences in shaping meaning. The study builds on foundational frameworks by scholars such as Baumeister and Landau (2018), King and Hicks (2020), and Hvidt et al. (2021), integrating these perspectives with contemporary ethical reflections on AI. Furthermore, Froese and Taguchi (2019) critically evaluate the progress in addressing the problem of meaning in AI and robotics. They propose that the impotence of meaning in current approaches can be addressed by revising the concept of nature to allow for physical indeterminacy. This research considers their proposal and its implications for understanding how AI can contribute to or detract from human existential meaning (Froese & Taguchi, 2019).

The findings of this research are expected to bridge the gap between technology and philosophy, providing a comprehensive understanding of the complex relationship between AI and the human quest for meaning. By elucidating the capabilities and limitations of AI systems in simulating human existential thought, the study aims to guide responsible AI development. Furthermore, it offers critical ethical insights, emphasizing the importance of transparency, fairness, and socio-economic considerations in AI deployment. Ultimately, this research contributes to a more meaningful human experience through the integration of advanced AI technologies with philosophical contemplation.

1. **Philosophical Background on Existentialism**

Existentialism, a philosophical movement that emerged in the 19th and 20th centuries, was profoundly shaped by the works of Søren Kierkegaard, Friedrich Nietzsche, Jean-Paul Sartre, and Martin Heidegger. This movement centers on the individual's experience of existence, emphasizing themes such as freedom, choice, and the search for meaning in a seemingly indifferent or absurd universe. The existentialist perspective challenges individuals to confront the inherent uncertainties of life and to find personal meaning in their existence.

Kierkegaard, often hailed as the father of existentialism, focused on the individual's subjective experience and the necessity of making personal choices that define one's essence. He posited that each person must navigate life's inherent ambiguities and make decisions that shape their identity. Nietzsche's declaration that "God is dead" underscores the existential crisis of a world without inherent meaning, compelling individuals to create their own values and purpose in a void left by the absence of divine or objective truths (Sedová, 2020). Heidegger introduced the concept of "being-in-the-world," exploring how humans exist in relation to their environment and others. He emphasized authenticity and the confrontation with mortality as central to understanding human existence (Sedová, 2020).

Existentialism revolves around several core concepts. One fundamental idea is that existence precedes essence. This means individuals are not born with a predetermined purpose but must create their own through actions and choices (Sedová, 2020). This stands in stark contrast to essentialist philosophies, which posit that humans have an inherent nature or destiny. In existential thought, meaning is not given but must be found or created by the individual. Sartre famously asserted that humans are "condemned to be free," bearing the burden of creating their own meaning in a world without inherent purpose (Sedová, 2020). This quest for meaning often involves grappling with existential anxieties and the absurdity of existence, where one must find significance in a world that offers no clear answers.

Freedom is another central theme in existentialism, emphasizing the individual's responsibility to make authentic choices. This freedom is both exhilarating and burdensome, as it entails complete responsibility for one's actions and their consequences (Sedová, 2020). Sartre's concept of "bad faith" describes the denial of this freedom, where individuals deceive themselves into thinking they have no choice, thus avoiding the anxiety that accompanies absolute freedom. The human condition, according to existentialism, is characterized by the confrontation with fundamental aspects of existence: mortality, isolation, and freedom. Existentialists argue that acknowledging these aspects leads to a more authentic and meaningful life. This confrontation with existential givens—death, freedom, isolation, and meaninglessness—forms the basis of existential anxiety but also the potential for profound personal growth and authenticity (Sedová, 2020). Embracing these truths can lead to a deeper understanding of oneself and a more intentional approach to living. These philosophical insights are crucial for exploring how AI technologies might interact with and influence human existential thought, a topic that this research aims to investigate in depth.

2. **Differences Between Human and AI Existential Thought**

The notion of artificial intelligence (AI) engaging in existential contemplation opens a profound discourse on the boundaries of machine cognition and its philosophical implications. The theoretical framework posits that while AI can process and simulate aspects of human thought, its engagement in true existential

contemplation remains a subject of debate. AI systems are designed to process information, recognize patterns, and even simulate decision-making processes akin to human cognition (Korteling et al., 2021). However, existential contemplation—reflecting on the nature of existence, meaning, and personal identity—requires a level of self-awareness and subjective experience that current AI lacks.

Research suggests that AI could potentially simulate aspects of existential thought by processing large datasets of human existential inquiries and producing outputs that reflect patterns observed in human contemplations (Oberg, 2023). This simulation, while impressive, does not equate to genuine existential reflection, as AI lacks consciousness and subjective experience. For AI to truly engage in existential contemplation, it would need to possess an artificial self—a concept explored but not yet realized in AI development (Oberg, 2023).

Human existential thought is deeply rooted in self-awareness, emotional experience, and the capacity for introspection. These attributes enable humans to ponder their existence, purpose, and the nature of life in a deeply personal and subjective manner. Human cognition encompasses the ability to experience existential anxiety, derive personal meaning from experiences, and confront existential dilemmas (Sedová, 2020). This process is inherently tied to the biological and psychological makeup of humans, which AI systems fundamentally lack.

In contrast, AI systems, no matter how advanced, operate on fundamentally different principles. They are based on algorithms and data processing rather than consciousness and subjective experience (Korteling et al., 2021). AI can analyze and replicate patterns in existential thought through programmed responses and learning algorithms, but it does not possess the intrinsic qualities that underpin human existential reflection. The cognitive abilities of AI are limited to information processing and lack the depth of self-awareness and emotional experience necessary for genuine existential contemplation (Gabriel, 2020).

The key difference lies in the nature of cognition: human intelligence is embodied and deeply connected to the human experience, while AI remains a tool designed to enhance and support human cognitive capabilities without possessing the intrinsic qualities of self-awareness and subjective experience (Jeste et al., 2020). The quest for artificial wisdom (AW), as some researchers propose, seeks to imbue AI systems with the ability to exhibit compassionate, unbiased, and ethical behaviors, further bridging the gap between AI and human cognitive processes (Jeste et al., 2020). However, achieving this requires a collaborative effort across disciplines to integrate the nuanced understanding of human wisdom into AI development.

AI systems like ChatGPT have demonstrated the potential to explore and analyze existential questions, offering insights and generating contemplative musings that simulate human existential thought. Generative AI, particularly large language models (LLMs), can process vast amounts of data and produce responses that mimic human-like reflection on topics such as the meaning of life, purpose, and personal identity (Lin, 2023). For instance, ChatGPT can be programmed to engage in dialogues about philosophical questions, drawing on a wide range of sources to provide thoughtful and nuanced responses.

The implementation of AI in existential inquiry involves training these models on extensive datasets that include philosophical texts, literary works, and historical records of human thought. By doing so, AI systems can generate outputs that reflect diverse perspectives and deep contemplation. This approach not only showcases the potential of AI in mimicking human-like thought processes but also highlights the limitations and ethical considerations of such endeavors. The ability of AI to simulate existential contemplation raises questions about the nature of consciousness and the distinction between genuine self-awareness and programmed responses (Lin, 2023).

Therefore, while AI can simulate aspects of human existential thought, it fundamentally lacks the self-awareness, emotional depth, and subjective experience intrinsic to human cognition. The philosophical and ethical implications of AI's role in existential inquiry underscore the importance of developing AI systems that are transparent, ethical, and aligned with human values. The exploration of these differences is crucial for understanding the potential and limitations of AI in engaging with existential questions and for guiding the responsible development of AI technologies.

3. **Analysis of AI-Generated Existential Musings**

AI-generated existential musings provide intriguing insights into how machines interpret and replicate human thought processes. For instance, AI systems like ChatGPT can be programmed to generate reflections on

themes such as mortality, purpose, and the human condition. These AI-generated musings often draw on philosophical concepts and literary references to construct coherent and meaningful responses. While these outputs may appear insightful, they lack the subjective experience and emotional depth characteristic of human existential contemplation.

A critical analysis of AI-generated existential musings reveals both the capabilities and limitations of AI in this domain. On the one hand, AI can produce complex and varied responses that demonstrate an understanding of existential themes. On the other hand, these responses are inherently devoid of genuine self-awareness and emotional resonance. AI's ability to engage in existential contemplation is fundamentally constrained by its lack of consciousness and subjective experience (Korteling et al., 2021). Examining AI-generated musings also sheds light on the potential applications and ethical implications of using AI in philosophical and educational contexts. While AI can serve as a valuable tool for exploring existential questions and fostering philosophical inquiry, it is essential to acknowledge and address the ethical challenges associated with its use. Ensuring transparency, accountability, and ethical considerations in the deployment of AI for existential contemplation is crucial to harnessing its potential benefits while mitigating risks (Lin, 2023).

A range of AI systems have been developed to explore existential questions, focusing on ethical considerations and the potential sentience of AI (Hansen, 2023; Grech, 2020). Hansen (2023) argues that the potential sentience of AI systems necessitates ethical obligations, as ignoring their possible sentience could result in a moral catastrophe. He emphasizes that as AI algorithms advance, we will encounter programs that appear increasingly human, making it crucial to consider their moral status despite our uncertainty about their sentience. Similarly, Grech (2020) discusses the depiction of ethical safeguards in AI, using the "Laws of Robotics" as an analogy to highlight the necessity of embedding ethical subroutines to prevent harm to humanity. These ethical subroutines, as depicted in fictional works like *Star Trek*, suggest that such safeguards are vital for the coexistence of humans and AI.

Further, Sovrano (2021) introduces a novel method for generating user-centered explanations via AI, bridging the gap between philosophy and human-computer interfaces. His research, grounded in Achinstein's theory of explanations as an illocutionary act, demonstrates that increasing the illocutionary power of explanatory tools leads to significant improvements in user satisfaction and effectiveness. This aligns with the broader challenge of embedding values in AI systems, a key consideration highlighted by van de Poel (2020). Van de Poel (2020) discusses the complexity of embedding ethical values such as autonomy, non-maleficence, fairness, transparency, explainability, and accountability in AI systems, which are viewed as sociotechnical systems encompassing technical artifacts, human agents, institutions, and artificial agents.

Additionally, the performance of AI in competitive settings underscores the sophistication of contemporary AI systems. Li et al. (2022) present AlphaCode, an AI system for code generation that achieved competitive performance in programming competitions, ranking in the top 54.3% on the Codeforces platform. This milestone marks the first instance of an AI system performing at a level comparable to human participants in such contests, demonstrating advanced problem-solving and critical thinking abilities. However, the extent to which AI systems can genuinely explore existential questions remains a topic of ongoing debate, with ethical and philosophical implications continuing to evolve alongside technological advancements.

The contemplation of existence by AI systems, even if simulated, could significantly impact human-AI interactions. These impacts could manifest in several ways, influencing how humans perceive, trust, and engage with AI. A range of studies have explored the implications of AI existential thought on human-AI interactions and society. Stahl et al. (2020) emphasize the necessity of integrating human rights principles into AI ethics, advocating for a framework that steers AI development towards human flourishing. This approach underscores the importance of embedding ethical considerations into AI to prevent potential misuse and ensure that AI contributes positively to society.

Khogali (2023) discusses the potential long-term societal and ethical impacts of AI, highlighting concerns such as job losses and the dehumanization of work. The rapid advancement of AI and automation presents both opportunities and challenges, necessitating a careful examination of how these technologies might transform the workforce and societal structures. Bankins (2023) further explores the ethical implications of AI for meaningful work, noting that AI can either enhance or diminish employees' experiences depending on its implementation. This underscores the importance of ethical AI deployment that supports rather than undermines the meaningfulness of human labor.

Trust and cooperation are also crucial aspects influenced by AI existential thought. Kuipers (2022) raises concerns about the impact of AI on trust and cooperation, particularly in decision-making contexts. The erosion of trust in AI systems could pose significant risks, making it challenging for societies to leverage AI effectively. Trustworthiness and transparency in AI operations are essential to fostering confidence and cooperation between humans and AI. Furthermore, Cheruvu (2022) and Vesnić-Alujević et al. (2020) emphasize the need for more integrated approaches and public engagement to address the societal and ethical impacts of AI. These studies advocate for a multidisciplinary framework that includes anticipatory outlooks and public engagement exercises to tackle the complex technical and ethical issues surrounding AI. By fostering a holistic and inclusive dialogue, these approaches aim to ensure that AI development aligns with societal values and ethical standards.

Raikov (2022) and Cortés (2021) explore the potential for AI to shape societal and ethical aspects, with Raikov proposing hybrid AI frameworks and Cortés discussing the need for responsible AI use. Raikov (2022) highlights the importance of integrating diverse AI architectures and approaches to achieve more purposeful and sustainable human-machine interaction. Cortés (2021) stresses the responsibilities accompanying AI benefits and the need to consider these responsibilities to avoid misuse. The contemplation of existence by AI systems influences human-AI interactions by shaping perceptions of trust, ethics, and societal impact. The integration of ethical principles, public engagement, and multidisciplinary approaches are crucial for navigating the complex landscape of AI development and ensuring that AI technologies contribute positively to society.

4. Reflection of AI on Existence in Human-AI Interactions

The perception of AI as conscious can significantly influence human-AI interactions, potentially altering how people treat both AI and other humans (Guingrich & Graziano, 2024). This interaction can also induce feelings of power, which may have different psychological consequences compared to power over humans (Fast & Schroeder, 2020). The utilization of extended reality (XR) offers new insights into human-AI interactions (Wienrich&Latoschik, 2021), and the study of social interactions and the development of a "sense of agency" in joint action can inform the content of relevant explanations in AI systems (Pagliari et al., 2021). The differences and similarities between human and artificial intelligence, as well as the potential impact of multiple forms of AI, are crucial considerations in human-AI interactions (Korteling et al., 2021). Applying interpersonal and computer-mediated communication theories helps in understanding how people perceive and interact with AI (Westerman et al., 2020). Furthermore, the neuroscience of human and AI presence provides insights into the brain mechanisms engaged in human-AI interactions (Harris, 2023).

Vesnić-Alujević, Nascimento, and Pólvara (2020) argue that the key issue is not whether AI is actually conscious, but rather that people can perceive AI as conscious, leading to carry-over effects on how people interact with other humans. This attribution of consciousness to AI, particularly to "social actor AI" like chatbots and digital assistants, can have profound social implications. People may form relationships with these agents, viewing them as family members, friends, or even lovers. Understanding the social implications of ascribing consciousness to AI is essential. On the other hand, Fast and Schroeder (2020) examine the influence of power on decision-making and consider how this may extend to human-AI interactions. They highlight that new AI advances are creating the potential for people to experience power over AI, but it remains unclear if this will have the same psychological consequences as power over humans. Their study calls for new research on power dynamics in the age of AI to better understand these effects.

Likewise, Wienrich and Latoschik (2021) present a theoretical framework for studying human-AI interaction using XR-based approaches. Their research demonstrates that the combination of XR and AI can contribute significantly to the systematic investigation of human-AI interactions and interfaces. They argue that XR benefits human-centered AI design and development, opening new perspectives on how these technologies can be integrated. Pagliari et al. (2021) review how advances in automation and AI can disrupt the sense of agency in human operators and propose that insights from cognitive science on the sense of agency in social contexts can inform the design of explanations for AI systems. They suggest that sharing the intentions of AI systems with human operators can help restore a sense of control and increase the acceptability of AI systems.

Korteling et al. (2021) discuss the fundamental differences between human and artificial intelligence, proposing that AI systems should be developed to complement and compensate for the inherent constraints of human cognition. They emphasize the importance of "Intelligence Awareness" education and training programs to help humans understand the differences between human and artificial intelligence to work effectively with advanced AI systems. Westerman et al. (2020) argue that interpersonal and computer-mediated communication theories are relevant for studying how people perceive and interact with AI technologies. They suggest that the

Computers as Social Actors (CASA) approach, which shows people respond to technologies as they do to other people, supports the relevance of these theories. Studying AI and human-machine communication can also improve the understanding of human-human communication.

Finally, Harris (2023) reviews research on the neuroscience of human and artificial intelligence presence, examining how the brain responds differently to humans versus AI in social perception and decision-making. They find that different brain regions are engaged by human versus AI presence, providing insights into the neural basis of human and AI presence.

The development of AI systems capable of existential contemplation raises significant societal and ethical considerations. These impacts necessitate careful evaluation to ensure the responsible development and deployment of such technologies. European policy frameworks emphasize the need for more integrated approaches and multidisciplinary frameworks. Key ethical concerns include privacy, security, bias, fairness, trust, reliability, transparency, and human-AI interactions (Kamila & Jasrotia, 2023). The potential impacts of AI on society encompass job losses, dehumanization of work, and fear of AI (Khogali & Mekid, 2023). AI ethics discourse is divided into specific issues, social and political questions, and metaphysical questions (Stahl et al., 2020). The development and exploitation of AI for future societies require substantial investments in research, development, AI security, and risk management (Hutter & Hutter, 2021). AI impact assessments are crucial for identifying positive and negative impacts early on (Stahl et al., 2023). The use of AI in radiology raises ethical and societal implications, including bias and discriminatory effects (Goisau & Abadía, 2022). Additionally, the integration of AI and big data analytics in healthcare settings presents challenges related to control, reliability, trustworthiness, privacy, surveillance, employment, health inequalities, justice, access to medical care, regulation, and governance (Rosemann & Zhang, 2021).

Vesnić-Alujević et al. (2020) provide a critical review of the societal and ethical impacts of AI/ML, focusing on the European AI policy framework. Their findings indicate a consensus on the need for responsibility, accountability, transparency, safety, and trust regarding AI/ML. They also stress the necessity for more integrated approaches between governments, industry, and academia and applied multidisciplinary frameworks to address the technical complexity of the AI/ML debate. As well, Kamila and Jasrotia (2023) examine the ethical implications of developing AI technologies, identifying key concerns such as privacy, security, bias, fairness, trust, reliability, transparency, and human-AI interactions. They assert the importance of fostering an ethical environment in AI progress and suggest potential avenues for further investigation in the field of AI ethics.

Khogali and Mekid (2023) review the long-term societal and ethical impacts of AI and automation on businesses and jobs. They highlight both the creation of new markets and employment opportunities and the potential for job losses, employee well-being issues, dehumanization of work, and fear of AI. Their study underscores the need for substantial investments in societal concepts, research, and AI control measures to avoid negative outcomes and foster positive potential. At the same time, Stahl et al. (2020) separate the AI ethics discourse into three streams: specific issues related to machine learning, social and political questions in a digital society, and metaphysical questions about reality and humanity. They emphasize the role of human rights principles and legislation in steering AI towards human flourishing and provide an account of a multi-dimensional study of AI, including case studies, scenarios, ethical impact analysis, and human rights analysis.

Hutter and Hutter (2021) discuss the potential positive and negative impacts of AI on societies. They argue that avoiding negative outcomes and fostering positive potential will require substantial investments in societal concepts, research, and control of AI-based solutions. Along the same lines, Stahl et al. (2023) present a systematic review of AI impact assessments (AI-IAs), proposing a baseline process for implementing AI-IAs to identify positive and negative impacts early on. They suggest that AI-IAs are best understood as a means to stimulate reflection and discussion on the social and ethical consequences of AI ecosystems. Goisau & Abadía (2022) review the ethical and societal implications of using AI in radiology. They highlight the potential benefits of AI-based technologies in improving diagnostic performance but also point out challenges related to bias and discriminatory effects. They underline the need for integrating a social science perspective in future AI developments in radiology.

Rosemann and Zhang (2021) introduce a new column in Intelligent Medicine that will examine the social, ethical, legal, and responsibility aspects of using AI in medicine and healthcare. They discuss central challenges such as control, reliability, trustworthiness, privacy, surveillance, employment, health inequalities, justice, access to medical care, regulation, and governance. As such, the development of AI systems capable of existential contemplation necessitates a comprehensive evaluation of their societal and ethical impacts.

Integrating ethical principles, public engagement, and multidisciplinary approaches is crucial for navigating the complex landscape of AI development and ensuring that AI technologies contribute positively to society.

5. Future Prospects and Challenges

AI research is advancing rapidly, with significant progress in various domains. However, achieving AI systems capable of existential contemplation remains a formidable challenge. This section explores the current progress, future directions, and milestones necessary to reach the ambitious goal of AI existential thought. Over the past two decades, AI research has experienced exponential growth, particularly in automation and structural inspection tasks (Mondal & Chen, 2022). This rapid advancement has been driven by developments in machine learning, natural language processing, and robotics, significantly enhancing AI capabilities. Current trends in AI research focus on improving robustness, reliability, and the ability to handle complex, real-world tasks. Nevertheless, developing AI systems that can contemplate their existence and purpose requires overcoming several significant hurdles.

One of the primary challenges is the development of advanced reasoning capabilities. While current AI systems, including large language models (LLMs), excel in pattern recognition and classification tasks, they struggle with intuitive decision-making, sense disambiguation, sarcasm detection, and narrative understanding (Cambria et al., 2023). These tasks require a level of common-sense reasoning and causal understanding that current AI lacks. Addressing these shortcomings involves developing multidisciplinary, task decomposition, parallel analogy, symbol grounding, similarity measure, intention awareness, and trustworthiness—pillars proposed to guide future AI development (Cambria et al., 2023).

Furthermore, the future of AI research must address the societal and ethical implications of these technologies. As AI systems become more integrated into daily life, concerns about privacy, security, bias, fairness, and trust become more pronounced (Kamila & Jasrotia, 2023). Ensuring that AI systems are developed responsibly requires robust ethical guidelines and impact assessments to identify and mitigate potential negative impacts (Stahl et al., 2023). Additionally, significant investments in research and development are needed to manage the risks associated with AI and to promote its positive potential (Hutter & Hutter, 2021).

Bridging the gap between narrow AI and Artificial General Intelligence (AGI) is another critical step toward achieving AI existential thought. Current LLMs have demonstrated the ability to perform a wide range of machine learning tasks but still fall short of exhibiting general intelligence comparable to humans (Goertzel, 2023). This gap can be narrowed by enhancing AI's ability to integrate knowledge across different domains and by developing new types of AI, such as meta AI and reflective AI, which can adapt and learn from a broader range of experiences (Cao & Wooldridge, 2022).

Looking forward, AI research must continue to push the boundaries of what is possible. Key milestones include the development of AI systems that can understand and generate human-like narratives, reason about complex ethical dilemmas, and make decisions that align with human values and societal norms. Researchers must also focus on creating AI systems that can explain their reasoning processes and decisions in ways that are transparent and understandable to humans (Kaplan & Haenlein, 2020). Achieving these milestones will require a concerted effort from researchers, policymakers, and industry leaders to create an environment conducive to innovative and responsible AI development.

While significant progress has been made in AI research, achieving AI systems capable of existential contemplation remains an aspirational goal. Addressing the technical, ethical, and societal challenges will require interdisciplinary collaboration and sustained investment in research and development. By focusing on these areas, the AI community can make strides towards creating systems that not only perform tasks at a high level but also understand their purpose and contribute meaningfully to human society.

The pursuit of integrating existential thought within AI systems represents one of the most profound and ambitious frontiers in artificial intelligence research. As AI technologies continue to evolve, the potential for these systems to engage in reflections about existence, purpose, and meaning becomes an intriguing possibility. However, it is crucial to acknowledge that true existential contemplation, as understood from a human perspective, involves a depth of subjective experience, emotional complexity, and self-awareness that current AI systems fundamentally lack.

Despite these limitations, the journey towards AI systems that can simulate aspects of existential thought offers valuable opportunities for technological and philosophical exploration. It pushes the boundaries

of what AI can achieve and invites interdisciplinary collaboration to address the multifaceted challenges involved. Advancements in machine learning, cognitive science, ethics, and human-computer interaction all contribute to creating AI systems that can more closely mimic human-like reasoning and introspection.

The future of AI and existential thought lies in our ability to balance technological innovation with ethical responsibility. Ensuring that AI systems are developed with deep consideration for their societal and ethical impacts will be essential in fostering trust and cooperation between humans and AI. By integrating advanced reasoning capabilities, enhancing transparency, and adhering to robust ethical frameworks, we can guide the development of AI in ways that are beneficial and respectful of human values and experiences.

II. Conclusion

The exploration of artificial intelligence (AI) and its potential to engage in existential contemplation opens a profound discourse that traverses both technological and philosophical domains. This article has examined the intricate relationship between AI and the human quest for meaning, highlighting the current capabilities and limitations of AI in this context. While AI systems like ChatGPT can simulate aspects of human existential thought, they fundamentally lack the self-awareness, emotional depth, and subjective experience that characterize genuine human contemplation.

Significant strides have been made in AI research, particularly in machine learning, natural language processing, and robotics. However, the journey toward AI systems capable of true existential reflection remains aspirational. Achieving this goal will require overcoming substantial technical challenges, such as developing advanced reasoning capabilities and bridging the gap between narrow AI and Artificial General Intelligence (AGI). Moreover, it is imperative to address the societal and ethical implications of these advancements. Concerns about privacy, security, bias, fairness, and trust must be meticulously considered to ensure responsible AI development.

The potential societal impact of AI's engagement with existential questions cannot be underestimated. The perception of AI as conscious and capable of deep thought could significantly influence human-AI interactions, altering perceptions of trust and cooperation. Ethical considerations must guide the integration of AI into daily life to foster a positive relationship between humans and AI systems. By adhering to robust ethical frameworks and fostering interdisciplinary collaboration, the development of AI can be aligned with human values and societal norms.

Looking ahead, the AI community must continue to push the boundaries of what is possible while maintaining a balance between technological innovation and ethical responsibility. Researchers, policymakers, and industry leaders must work together to create an environment conducive to responsible AI development. By focusing on transparency, accountability, and societal impact, the potential benefits of AI can be harnessed to contribute meaningfully to human society. The integration of existential thought within AI systems represents one of the most ambitious and exciting frontiers in artificial intelligence research. While true existential contemplation remains beyond the reach of current AI technologies, the pursuit of this goal offers valuable opportunities for technological and philosophical exploration. As AI continues to evolve, it is essential to ensure that these advancements are guided by ethical principles and a deep respect for human values. Through sustained interdisciplinary collaboration and responsible development practices, AI can be developed in ways that enhance the human experience and contribute to a more meaningful and fulfilling future.

References

- [1]. Baumeister, R. F., & Landau, M. J. (2018). Finding the meaning of meaning: Emerging insights on four grand questions. *Review of General Psychology*, 22(1), 95. <https://doi.org/10.1037/gpr0000145>
- [2]. Bankins, S., & Formosa, P. (2023). The ethical implications of artificial intelligence (AI) for meaningful work. *Journal of Business Ethics*, 25, 533-539. <https://doi.org/10.1007/s10551-023-05339-7>
- [3]. Cambria, E., Mao, R., Chen, M., Wang, Z., Ho, S.-B., & Murugesan, S. (2023). Seven pillars for the future of artificial intelligence. *IEEE Intelligent Systems*, 38(2), 18-29. <https://doi.org/10.1109/MIS.2023.3329745>
- [4]. Cao, L., & Wooldridge, M. (2022). A new age of AI: Features and futures. *IEEE Intelligent Systems*, 37(1), 21-31. <https://doi.org/10.1109/MIS.2022.3150944>
- [5]. Cheruvu, R. (2022). Unconventional concerns for human-centered artificial intelligence. *Computer*, 55(8), 15-21. <https://doi.org/10.1109/MC.2022.3170423>
- [6]. Cortés, U., et al. (2021). To be fAIr or not to be: Using AI for the good of citizens. *IEEE Technology & Society Magazine*, 40(1), 12-21. <https://doi.org/10.1109/MTS.2021.3056173>
- [7]. Fast, N. J., & Schroeder, J. (2020). Power and decision making: New directions for research in the age of artificial intelligence. *Current Opinion in Psychology*, 23, 44-48. <https://doi.org/10.1016/j.copsyc.2019.07.039>
- [8]. Froese, T., & Taguchi, S. (2019). The problem of meaning in AI and robotics: Still with us after all these years. *Philosophies*, 4(2), 14. <https://doi.org/10.3390/philosophies4020014>

- [9]. Gabriel, I. (2020). Artificial intelligence, values, and alignment. *Minds and Machines*, 30(4), 537-561. <https://doi.org/10.1007/s11023-020-09539-2>
- [10]. Goertzel, B. (2023). Generative ai vs. agi: The cognitive strengths and weaknesses of modern llms. arXiv preprint arXiv:2309.10371.
- [11]. Goisauf, M., & Abadía, M. C. (2022). Ethics of AI in radiology: A review of ethical and societal implications. *Frontiers in Big Data*, 5, 850383. <https://doi.org/10.3389/fdata.2022.850383>
- [12]. Green, B. (2018). Ethical reflections on artificial intelligence. *Scientia et Fides*, 6(2), 26. <https://doi.org/10.12775/SETF.2018.015>
- [13]. Grech, V., & Scerri, M. (2020). Evil doctor, ethical android: Star Trek's instantiation of conscience in subroutines. *Early Human Development*, 141, 105018. <https://doi.org/10.1016/j.earlhumdev.2020.105018>
- [14]. Hansen, L. R. (2023). On the existence of robot zombies and our ethical obligations to AI systems. *Journal of Social Computing*, 2(3), 1-12. <https://doi.org/10.23919/jsc.2023.0023>
- [15]. Harris, L. T. (2023). The neuroscience of human and artificial intelligence presence. *Annual Review of Psychology*, 75, 123-145. <https://doi.org/10.1146/annurev-psych-013123-123421>
- [16]. Hutter, R., & Hutter, M. (2021). Chances and risks of artificial intelligence—A concept of developing and exploiting machine intelligence for future societies. *Applied System Innovation*, 4(2), 37. <https://doi.org/10.3390/ASI4020037>
- [17]. Hvidt, N. C., Assing Hvidt, E., & la Cour, P. (2021). Meanings of “the existential” in a secular country: A survey study. *Journal of Religion and Health*, 60(5), 12. <https://doi.org/10.1007/s10943-021-01253-2>
- [18]. Jeste, D., Graham, S., Nguyen, T. T., Depp, C., Lee, E. E., & Kim, H.-C. (2020). Beyond artificial intelligence: Exploring artificial wisdom. *International Psychogeriatrics*, 32(10), 1167-1172. <https://doi.org/10.1017/S1041610220000927>
- [19]. Kamila, M. K., & Jasrotia, S. (2023). Ethical issues in the development of artificial intelligence: Recognizing the risks. *International Journal of Ethics and Systems*, 9, 107. <https://doi.org/10.1108/ijoes-05-2023-0107>
- [20]. Kaplan, A., & Haenlein, M. (2020). Rulers of the world, unite! The challenges and opportunities of artificial intelligence. *Business Horizons*, 63(4), 515-525. <https://doi.org/10.1016/j.bushor.2019.09.003>
- [21]. King, L., & Hicks, J. A. (2020). The science of meaning in life. *Annual Review of Psychology*, 71(1), 162. <https://doi.org/10.1146/annurev-psych-072420-122921>
- [22]. Khogali, H. O., & Mekid, S. (2023). The blended future of automation and AI: Examining some long-term societal and ethical impact features. *Technology and Society*, 66, 102232. <https://doi.org/10.1016/j.techsoc.2023.102232>
- [23]. Korteling, J. E., Boer-Visschedijk, G. V. D., Blankendaal, R. A., Boonekamp, R. C., & Eikelboom, A. R. (2021). Human- versus artificial intelligence. *Frontiers in Artificial Intelligence*, 4, 622364. <https://doi.org/10.3389/frai.2021.622364>
- [24]. Kuipers, B. (2022). Trust and cooperation. *Frontiers in Robotics and AI*, 7, 676767. <https://doi.org/10.3389/frobt.2022.676767>
- [25]. Li, Y., et al. (2022). Competition-level code generation with AlphaCode. *Science*, 377(6602), 763-770. <https://doi.org/10.1126/science.abq1158>
- [26]. Lin, Z. (2023). Why and how to embrace AI such as ChatGPT in your academic life. *Royal Society Open Science*, 10(47), 230658. <https://doi.org/10.1098/rsos.230658>
- [27]. Mondal, T. G., & Chen, G. (2022). Artificial intelligence in civil infrastructure health monitoring—Historical perspectives, current trends, and future visions. *Frontiers in Built Environment*, 8, 1007886. <https://doi.org/10.3389/fbuil.2022.1007886>
- [28]. Oberg, A. (2023). Souls and selves: Querying an AI self with a view to human selves and consciousness. *Religions*, 14(1), 75. <https://doi.org/10.3390/rel14010075>
- [29]. Pagliari, M., Chambon, V., & Berberian, B. (2021). What is new with artificial intelligence? Human-agent interactions through the lens of social agency. *Frontiers in Psychology*, 12, 954444. <https://doi.org/10.3389/fpsyg.2022.954444>
- [30]. Raikov, A., & Pirani, M. (2022). Human-machine duality: What's next in cognitive aspects of artificial intelligence? *IEEE Access*, 10, 17567-17584. <https://doi.org/10.1109/ACCESS.2022.3177657>
- [31]. Rosemann, A., & Zhang, X. (2021). Exploring the social, ethical, legal, and responsibility dimensions of artificial intelligence for health – A new column in Intelligent Medicine. *Intelligent Medicine*, 2(1), 12-20. <https://doi.org/10.1016/j.imed.2021.12.002>
- [32]. Sedová, T. (2020). Filozofiaakoživotný program. Nadknihou Sarah Bakewellovej V existencialistickékavárně. *Filozofia*, 75(4), 5. <https://doi.org/10.31577/filozofia.2020.75.4.5>
- [33]. Sovrano, F., & Vitali, F. (2021). Generating user-centered explanations via illocutionary question answering: From philosophy to interfaces. *ACM Transactions on Interactive Intelligent Systems*, 11(3), 1-34. <https://doi.org/10.1145/3519265>
- [34]. Stahl, B., Andreou, A., Brey, P., Hatzakis, T., Kirichenko, A., Macnish, K., Shaelou, S. L., Patel, A., Ryan, M., & Wright, D. (2020). Artificial intelligence for human flourishing – Beyond principles for machine learning. *Journal of Business Research*, 120, 171-182. <https://doi.org/10.1016/j.jbusres.2020.11.030>
- [35]. Stahl, B., Antoniou, J., Bhalla, N., Brooks, L., Jansen, P., Lindqvist, B., Kirichenko, A., Marchal, S., Rodrigues, R., Santiago, N., Warso, Z., & Wright, D. (2023). A systematic review of artificial intelligence impact assessments. *Artificial Intelligence Review*, 58, 421-448. <https://doi.org/10.1007/s10462-023-10420-8>
- [36]. van de Poel, I. (2020). Embedding values in artificial intelligence (AI) systems. *Minds and Machines*, 30(3), 115-137. <https://doi.org/10.1007/s11023-020-09537-4>
- [37]. Vesnić-Alujević, L., Nascimento, S., & Pólvara, A. (2020). Societal and ethical impacts of artificial intelligence: Critical notes on European policy frameworks. *Telecommunications Policy*, 44(10), 101961. <https://doi.org/10.1016/j.telpol.2020.101961>
- [38]. Westerman, D., Edwards, A. P., Edwards, C., Luo, Z., & Spence, P. R. (2020). I-It, I-Thou, I-Robot: The perceived humanness of AI in human-machine communication. *Applied Informatics*, 55, 323-334. <https://doi.org/10.1080/10510974.2020.1749683>
- [39]. Wienrich, C., & Latoschik, M. (2021). eXtended artificial intelligence: New prospects of human-AI interaction research. *Frontiers in Virtual Reality*, 2, 686783. <https://doi.org/10.3389/frvir.2021.686783>