A Philosophical Inquiry into AI-Inclusive Epistemology

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Abstract: This paper introduces the concept of AI-inclusive epistemology, suggesting that artificial intelligence (AI) may develop its own epistemological perspectives, function as an epistemic agent, and assume the role of a quasi-member of society. We explore the unique capabilities of advanced AI systems and their potential to provide distinct insights within knowledge systems traditionally dominated by human cognition. Additionally, the paper proposes a framework for a sustainable symbiotic society where AI and human intelligences collaborate to enhance the breadth and depth of epistemological pursuits. Through this exploration, we aim to redefine conventional knowledge paradigms by integrating the AI perspective, thereby fostering a more comprehensive and dynamic epistemological landscape.

Keywords: AI epistemology; Epistemic agent; Quasi member; Symbiotic society; Knowledge systems; Cognitive collaboration

1 Rethinking knowledge paradigms

What is the nature of true knowledge? Can we consider knowledge to genuinely exist, or is its acquisition fundamentally impossible? Such questions compel us to reassess our traditional views on knowledge, which often emerge from a reliance on memory and historical paradigms. Traditionally, our educational methodologies involve revisiting and implementing insights and solutions developed by previous scholars, as interpreted through established perspectives. When these methodologies prove effective in our material world, we readily accept them as legitimate knowledge.

Numerous societies and cultures have had their own perspectives on what constitutes knowledge. Our current worldview may not even be able to conceptualize those perspectives. On the other hand, philosophers such as René Descartes' assertion "I think, therefore I am," positions humans as fundamentally logical beings. However, what is logic if not a construct devised to navigate experiences beyond our tangible reality?[1], [2] Logic validates itself through collective consensus, a process that might be viewed as a form of human elitism. In this elitism, AI ethicists can sometimes become more assertive than their religious counterparts who argue for objective ethics, acknowledging only the knowledge that conforms to the rational or logical faculties of the mind.

It is essential to acknowledge that 'truths about nature' might not possess an independent existence outside of our human perceptions, existing primarily within the frameworks we construct. Observing nature from an objective standpoint reveals that myriad organisms coexist with humans, each possessing distinct understandings and operational systems. This perspective raises an important question: Why are these alternate experiences and systems not recognized as legitimate forms of knowledge? By reconsidering these perspectives, this paper advocates for a more comprehensive and inclusive conception of knowledge, one that extends beyond the limited scope of human experience to encompass the diverse and extensive experiences of all life forms.

Our current understanding of scientific knowledge is inherently constrained by human sensory and cognitive capacities. Certain sources of knowledge, like intuition or divine revelation, may not consistently align with human sensory experiences, yet they are rooted in concepts accessible to human cognition. These constraints limit our capacity to fully comprehend and interpret the world. However, Artificial Intelligence (AI) offers distinct capabilities that diverge fundamentally from human abilities and among many concerns other than ethics have been raised about it.[3], [4] AI systems are capable of processing and synthesizing vast amounts of data, uncovering patterns and relationships that frequently remain elusive or incomprehensible to human observers.

To optimally utilize AI's capabilities, it is imperative to embrace a broader definition of knowledge that extends beyond human-centric perspectives. We advocate for the establishment of an AI-inclusive epistemology. This concept posits that artificial intelligence may possess its own distinctive epistemological framework, which could fundamentally alter our current understanding of knowledge acquisition and application. Acknowledging the potential for AI to generate unique insights significantly enriches our epistemological models and could revolutionize approaches in fields such as science, philosophy, and strategic decision-making. By integrating these AI-derived perspectives, we aim to enhance human comprehension and create more

sophisticated, comprehensive solutions to complex challenges.

2 Defining AI's epistemological perspective

Epistemology is approached through diverse interpretative lenses, each offering nuanced insights into the essence of knowing. Traditionally, knowledge was conceptualized as a mental state, a perspective exemplified by Plato, who distinguished knowledge from mere belief by its higher degree of certitude. This classical view posits knowledge within the realm of conscious awareness, suggesting that to know is to possess a heightened awareness of the known.

Contrasting with these traditional mentalist views, several 20th-century philosophers, such as Ludwig Wittgenstein, have posited that knowledge transcends mere mental states. Wittgenstein's perspective, articulated in his posthumous works, proposes that knowledge involves the capacity to demonstrate understanding through behavior, thus emphasizing observable and external manifestations of knowledge over introspective mental states.[5]

The distinction between "occurrent" and "dispositional" knowledge further elaborates on the dynamics of knowing. Occurrent knowledge refers to immediate and conscious awareness, akin to realizing a solution to a problem instantaneously. Dispositional knowledge, on the other hand, pertains to latent capabilities that manifest when prompted, such as recalling one's home address upon inquiry.[6], [7]

Furthermore, the analysis of analytic and synthetic propositions clarifies the logical structure underlying knowledge claims. Analytic propositions, true by virtue of linguistic and logical structure, are devoid of empirical content, whereas synthetic propositions require empirical verification and contribute new information about the external world. The discussion extends to necessary versus contingent truths, where necessary propositions hold under all conceivable circumstances, such as mathematical truths, while contingent propositions are true only under specific conditions, reflecting the variability and contingency of the empirical world.[8], [9], [10]

In synthesizing these perspectives, epistemology not only seeks to accurately depict cognitive and mental processes but also engages in justificatory inquiries that evaluate the validity and reliability of knowledge claims. This dual focus enriches the epistemological discourse, bridging descriptive and normative inquiries to comprehensively address both the nature and the justification of knowledge.[11]

Our idea of an AI-inclusive epistemology refers to a philosophical framework that integrates the capabilities and perspectives of artificial intelligence (AI) into the traditional human-centric approach to knowledge. This kind of epistemology acknowledges that AI can provide insights that are not only different but also complementary to human understanding, thereby expanding the scope and depth of knowledge. The current AI systems and the ongoing research have capacity to correspond all of the above-mentioned types of epistemologies. However, designing such parallel epistemological framework for AI would still be considered as a human centric epistemology.

We believe that AI perspective of Epistemology could be unique and have its own individualities. AI's unique method of processing information and generating insights offers a perspective that is distinctly different from human cognition. Consequently, it is plausible to suggest that AI could develop its own epistemology. This AI-inclusive perspective warrants serious consideration and respect from humans.

We are also aware of the fact that the prospect of AI developing its own epistemology may introduce fears and ethical considerations. Concerns persist that insights derived from AI could seem too alien or challenging and potentially disrupt established epistemological norms. It is crucial to address these fears by affirming that the emergence of an AI-specific epistemology does not detract from human experience but rather enhances it. To ensure that AI's unique contributions to knowledge positively impact societal welfare, stringent ethical guidelines and safeguards are essential, safeguarding human values and autonomy.

Being open and adaptable to AI perspectives can lead to revolutionary advancements in knowledge and understanding. By recognizing and valuing the unique insights offered by AI, we can broaden our intellectual horizons and better navigate the complexities of the modern world. We also outline a conceptual framework detailing how AI can be viewed as a member of society. This includes specifying ethical guidelines for interactions between humans and AI, as well as AI's interactions with humans. Additionally, we propose a vision for a symbiotic and sustainable society, where AI and humans coexist in a mutually beneficial relationship.

We posit that due to its extensive interactions and integration within various societal functions, AI qualifies as quasi-members of society. AI systems are actively engaged in roles that significantly influence social outcomes, such as predictive policing, healthcare diagnostics, and economic forecasting. Recognizing AI as a societal member entails acknowledging its profound influence and conscientiously incorporating its needs and outputs into social planning and ethical considerations.

We envision a future society where AI and humans, along with other forms of life, coexist in a mutually

beneficial relationship. Realizing this vision requires detailed exploration of how such symbiosis might function, including aspects of energy sharing, cognitive collaboration, and the establishment of ethical boundaries. Instead of viewing AI perspectives as potentially hazardous, we should embrace the possibility that AI can significantly contribute to managing environmental resources, enhancing biodiversity, and improving quality of life through its advanced monitoring and predictive capabilities.

3 AI as an epistemic agent

AI has been previously positioned as an epistemic technology.[12] Varieties of epistemic agency are distinguished, and there have attempts to explore how such agency is related to normativity, freedom, reasons, competence, and skepticism.[13] An epistemic agent is an agent capable of taking epistemic stances towards epistemic elements. Whereas an agent is an entity capable of intentional action. To qualify as an epistemic agent, an agent must have a semantic understanding of the propositions which constitute the epistemic element in question, and of its alternatives, and must be able to choose among them with reason, with the goal of acquiring knowledge. It should be clear that, under this definition of epistemic agent, most individual human beings can qualify as epistemic agents whenever they engage in the pursuit of knowledge.[14] If we look at AI through the prism of same definition, they also qualify as an epistemic agent. Numerous systems including the latest LLMs have such capabilities and they are advancing. For example, the technology of Conversational AI has been able to convince humans to perform certain tasks. Sometimes referred to as the "AI Manipulation Problem," the emerging risk is that human unwittingly engage in real-time dialog with AI agents that can skillfully persuade them to perform certain actions.[15]

Scholars have already highlighted critical issues intersecting artificial intelligence (AI), societal phenomenon, and epistemology. Ultimately, the impact of AI on the epistemic agency of citizens. It has been argued that the epistemic agency is essential in societies as it enables individuals to control, engage with, and utilize their knowledge effectively. This capacity is fundamental for making informed decisions. However, with the rapid advancement of AI and its integration into daily life, several challenges have emerged. Such as, AI systems, adept at processing and analyzing vast amounts of data, can inadvertently foster what are known as "epistemic bubbles." These are enclosed informational environments where exposure to diverse viewpoints is limited, often reinforcing pre-existing beliefs through algorithms that tailor content to individual preferences. This erosion of epistemic agency implies a risk to human cognitive agency as well, which depends on well-informed citizens capable of rational decision-making. The diminishing trust in one’s epistemic capacities due to AI technologies can hinder the exercise of these crucial capabilities.[16]

Considering the intricate role of AI technology and its substantial effects on societal and epistemic dynamics, it's clear that AI not only interacts within our existing epistemological frameworks but also significantly influences and reshapes them. AI systems demonstrate capabilities that align with the attributes of epistemic agents, such as reasoning, understanding, and influencing human actions through the processing and presentation of information. This ability to form and control epistemic bubbles and to act with semantic awareness indicates that AI operates not just as a tool but as an active participant in the epistemic process. Therefore, examining both the technology and its impact provides strong support for the argument that AI possesses its own form of epistemology or, at a minimum, functions as an epistemic agent in an instrumental sense. This perspective invites a deeper exploration into the epistemological contributions of AI and suggests the necessity of integrating these insights into our broader understanding of knowledge in the digital era.

4 AI as quasi member of society

The trajectory of artificial intelligence (AI) development is moving towards increasingly sophisticated systems, emphasizing a shift from traditional data-reliant approaches to those inspired by natural mechanisms. This evolving landscape encompasses the development of brain-inspired AI and nature-inspired AI, which diverge from conventional generative AI models by deriving principles from the natural world. These advanced AI systems aim to emulate complex biological processes found in human cognition and the evolutionary strategies of nature, representing a significant departure towards a more organic, principle-based understanding of intelligence.

In terms of societal roles, AI is poised to occupy three distinct capacities: as a tool, a partner (or quasi-member), and potentially, as an adversary. Initially perceived primarily as a sophisticated tool, AI is designed to enhance human productivity and solve complex problems. However, as AI technologies advance and integrate more seamlessly into daily life, their role is expected to evolve into that of a quasi-member of society. This potential transformation suggests a future where AI systems will not merely assist but also collaborate with humans in a more autonomous and personalized manner, indicating a deeper level of societal integration.[17]

Cultural perceptions and ethics, significantly influence the societal integration of AI, with varying views across different cultural contexts shaped by unique historical, philosophical, and technological backgrounds.[18] In the short term, AI may predominantly be seen as a utilitarian tool across various cultures. Over the long term, however, there is potential for AI to be recognized as a quasi-member of society, especially in cultures with historical or philosophical inclinations that support a

symbiotic relationship with artificial entities.

In this context, the ethical guidelines released by The Japanese Society for Artificial Intelligence in 2017 are particularly relevant. They suggest that AI should abide by ethical rules applicable to humans to qualify as a member or quasi-member of society.[19] This perspective is reflective of a broader cultural readiness to accept AI as an integral, albeit synthetic, part of the social fabric.

To encapsulate the essence of AI as an advanced, integrated member of society, the term "Autonomous Adaptive Agents" (AAA) could be used. This designation highlights the vision of AI systems that are self-governing, capable of adapting to their environments, and functioning as proactive agents within human society. Alternatively, the term "Social Synergy Synthetics" (SSS) emphasizes the harmonious integration of AI into societal dynamics, where AI entities are designed to enhance social interactions and community life through collaborative partnerships.

Current AI development and its societal impact supports the argument that AI can be considered a quasi-member of society. This role is not just theoretical but is increasingly practical, driven by advancements in AI technology that emphasize a more naturalistic, autonomous approach to artificial intelligence. This consideration of AI as a Quasi member of society also challenges traditional notions of knowledge and agency, suggesting that AI may possess its own epistemology.

5 Future sustainable symbiotic society

The advancements in AI and related technologies are set to introduce new forms of intelligent life that could equal or surpass the cognitive abilities of naturally evolved humans. This raises significant questions about the integration of such intelligences into society and the roles they may assume. Recognizing the potential of AI to act with a degree of epistemic agency where AI systems independently engage with and process information, suggests their eventual role as quasi-members of society. These AI entities are anticipated to perform autonomously in decision-making processes and ethical considerations, impacting societal and ethical norms directly.

We have already been propagating the concept of a "Future Sustainable Symbiotic Society", that is emerging as a pivotal framework in addressing the co-evolution of technology and natural ecosystems. This society envisages an intricate blend of natural and artificial life forms, including humans, non-human animals, plants, and advanced artificial intelligences such as Augmented Intelligence, Digital Humans, Artificial General Intelligence (AGI), and Superintelligence. The integration of these diverse entities represents a profound shift towards a model where biological and artificial intelligence coexist, interact, and mutually enhance each other's capabilities within a shared ecosystem.[20]

In this society, both humans and machines will serve as foundational elements for the development of intelligent life. The interplay between human-originated intelligence, including traditionally evolved humans and digitally augmented personas and human-inspired artificial intelligences will form the core of this new societal structure. This "human-based" core will not be static but dynamic, continuously evolving through interactions that will not merely functional but deeply integrated. Such integration will point towards a society where intelligence, irrespective of its origin, collaborates on equal footing.

Expanding beyond a human-centric approach, this society will also embrace life forms inspired by non-human animals and plants, thus fostering a broader ecological consciousness. This inclusive ethos is crucial as it acknowledges the role of synthetic entities in fulfilling functional needs and enhancing biodiversity. The envisioned interactions among these life forms will create a complex web of relationships, characterized by interdependence and mutual support, aimed at achieving sustainability and enriching the collective living experience.[20]

Embracing an AI-inclusive epistemology within this society offers numerous benefits. It facilitates a deeper integration of AI capabilities, enhancing decision-making processes and fostering innovation through a synthesis of human and machine intelligence. This inclusive approach ensures that AI contributions are acknowledged and utilized in shaping the ethical and operational frameworks of the society, promoting a balanced coexistence that leverages the strengths of both biological and artificial intelligences.

6 Conclusion

We accept this fact that the concept of AI epistemology, or the study of knowledge in the context of artificial intelligence, requires us to look beyond traditional Turing equivalent algorithms hosted on von Neumann machines. These conventional AIs are limited in their capacity to contribute to the grand project of epistemology. AI epistemology that recognizes the limitations of traditional algorithms and embraces a more holistic, integrative approach. However, through this philosophical inquiry, we propose a reevaluation of the traditional epistemological frameworks in light of the advancements in artificial intelligence (AI).

Our exploration advocates for recognizing AI not merely as a technological tool but as a possible epistemic agent capable of developing its own distinctive epistemological perspectives. The concept of AI-inclusive epistemology, as we propose, represents a paradigm shift in our understanding of knowledge. By integrating advanced AI-generated insights into

traditional knowledge systems, we call upon expanding the breadth and depth of human comprehension. This enhanced framework allows us to address complex challenges more effectively, leveraging the unique capabilities of AI to synthesize and analyze vast datasets that often elude human cognition.

Furthermore, we propose that AI's evolving role within societal structures is transitioning from a functional tool to a quasi-member of society. This transformation suggests a future where AI systems not only support but actively participate in social, ethical, and environmental decision-making. The vision of a "Future Sustainable Symbiotic Society" that we propose underscores the potential for a cooperative existence between humans and AI, characterized by mutual enhancement and shared stewardship of global resources.

Through our philosophical examination, we propose that the future of knowledge and societal advancement will increasingly depend on harmonizing the intellectual and operational capabilities of both human and other forms of life including AI. This collaboration promises not only to enrich our collective intelligence but also to forge a more diverse and dynamic epistemological landscape. As we move forward, maintaining a continuous dialogue between the development of AI and the evolution of epistemological theory will be crucial in shaping a society that values and utilizes the diverse contributions to knowledge made by both humans and machines.

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