



Why the Superiority of Artificial Intelligence Over Human Intelligence Is by No Means Guaranteed – An Epistemological, Cognitive, and Sociological Analysis

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Abstract

The current debate on artificial intelligence (AI) is marked by a striking tension: on the one hand, modern systems demonstrate impressive capabilities in areas such as natural language processing, pattern recognition, and strategic optimization; on the other hand, these advances are increasingly being used to support the claim that artificial intelligence is on the verge of, or has already achieved, superiority over human intelligence. This article argues that such a conclusion is scientifically premature. The performance of today's AI systems is based primarily on statistical approximation, massive computing power, and data-driven correlation—but not on consciousness, intentionality, semantic understanding, or autonomous cognitive ability. The article examines the differences between functional performance and genuine intelligence, analyzes the epistemic limits of current AI architectures, and discusses the unique role of human experience, creativity, morality, and self-reflection. The central thesis is: AI can outperform humans in specific task domains, but to date there is no convincing scientific basis for the assumption of a general superiority of artificial intelligence over human intelligence as a comprehensive cognitive phenomenon. Even AI “knows” this.

Keywords: Consciousness, creativity, Genuine embodiment, Human intelligence, Moral autonomy

Introduction

Hello ChatGPT, why shouldn't anyone believe in the superiority of artificial intelligence over human intelligence? Hardly any other field of technology is currently the subject of such intense debate as artificial intelligence. Advances in large language models, multimodal systems, and autonomous decision-making architectures have fundamentally changed public perception. In academia, industry, and politics, there is growing discussion of the possibility that AI systems could not only complement humans but eventually surpass them in the long term.

This assumption is often based on an implicit comparison: if machines perform certain cognitive tasks more efficiently than

humans, this must imply general intellectual superiority. However, this is precisely where the central critique of this article comes in. Equating specialized performance with intelligence in the broadest sense is epistemologically problematic.

Human intelligence is not an isolated computational process. It is embodied, emotionally embedded, socially shaped, historically developed, and existentially motivated. AI systems, on the other hand, operate within formally defined mathematical structures. Their capabilities are not based on experience or consciousness, but on mathematical optimization (Romera-Paredes [1], Shardlow & Przybyła [2]). The claim of general AI superiority

therefore presupposes that intelligence can be reduced entirely to information processing—an assumption that is by no means scientifically established.

The Confusion between Performance and Understanding

Modern AI systems give the impression of understanding. Language models generate coherent texts, answer complex questions, and simulate argumentative structures. However, these capabilities do not necessarily mean that the systems “understand” what they are talking about. John Searle’s “Chinese Room” thought experiment (Searle [3]) already highlighted this problem: A system can generate linguistically correct responses without possessing semantic understanding. The manipulation of symbols is not the same as an awareness of meaning. Current AI models operate probabilistically at their core. They calculate probabilities for linguistic or visual patterns based on enormous amounts of data. This results in functional competence, but not in intentionally directed insight. The system does not “know” what truth, pain, responsibility, or mortality mean. It recognizes statistical correlations between symbols.

This distinction is crucial. A human being can not only analyze a sentence syntactically but also understand it existentially. When a human speaks of loss, they do so based on lived experience. AI reproduces semantic structures without itself being part of an experiential world. The claim that AI systems possess mental states rests solely on the premise that most philosophers of mind do not share: that mental states can be neatly separated from consciousness (Farrell [4]; Brown et al., [5], Bracker [6]). Therefore, caution is warranted when linguistic fluency is equated with genuine intelligence. The ability to simulate convincingly must not be confused with inner understanding.

Intelligence is more than just Information Processing

Many technological predictions about the future are based on a computationalism view of humanity: in this view, the brain is primarily seen as a biological computer, consciousness as emergent computational power, and thinking as information processing. However, research in neuroscience, philosophy, and cognitive science paints a far more complex picture. Human intelligence does not arise in isolation within the brain, but rather through the interplay of the body, the environment, emotion, social interaction, and cultural embeddedness.

The theory of “embodied cognition,” for example, argues that thinking is fundamentally embodied (Barsalou, [7]; Wilson [8]). Perception, movement, and physical experience fundamentally shape cognitive processes. A person does not understand space, weight, time, or danger abstractly, but physically. Anyone whose pulse has raced while falling in love, or whose heart has literally dropped into their pants due to a bad decision in life, can surely relate to this.

AI systems lack any genuine embodiment of this kind. Chalmers agrees with this when he argues, on the one hand, that bodies are

necessary for certain forms of consciousness, not least for bodily awareness. On the other hand, he also asks whether a body is necessary for all forms of consciousness (Chalmers [9]). Even robotic systems lack subjective experience of their environment. They process sensor data but do not experience the world.

Equally central is the role of emotions. For a long time, emotions were regarded as a disruptive factor in rational processes. Today we know that they are essential for decision-making, prioritization, and moral judgment. Humans do not act solely logically; they act in a meaning-oriented way. AI has no intrinsic goals, no fear, no hope, no responsibility, and no need for meaning. Its “decisions” are mathematical outputs of defined optimization processes. Reducing intelligence to computational power therefore ignores fundamental dimensions of human cognition.

Creativity and Originality: Simulation or Creation?

Advocates of AI superiority often point to the creative outputs of generative systems: musical compositions, image generation, or literary texts. Yet here, too, the fundamental question regarding the nature of creativity arises. Human creativity often arises from tension and conflict (Calic & H  lie [10]) as well as experience and biographical singularity (Baader et al., [11]). Art is not merely a combination of existing patterns, but an expression of subjective existence.

Generative AI, on the other hand, operates re-combinatorially. It generates new variants based on existing data spaces. This can be aesthetically impressive (Habermehl [12]) but does not necessarily constitute original creation in the human sense. A poem written by a human can be an expression of loss, love, or fear. The same poem generated by AI is the result of statistical probabilities without any inner experience. Of course, one could argue that human creativity is also based on neural patterns. But even if that were true, the qualitative difference remains: humans experience the content of their thoughts; AI systems do not. A study on crowdsourced idea competitions suggests that “AI [therefore] does not replace human judgment in idea generation, but [at best] refines the evaluation of ideas” (Bell et al. [13]). The question, therefore, is not whether AI can generate creative products, but whether creativity can be fully understood at all without subjective experience.

The Illusion of Objective Rationality

Another argument for the superiority of AI is that machines are more rational than humans. Indeed, in clearly defined tasks, algorithms can significantly outperform humans in terms of error rates. But rationality alone is not a sufficient criterion for intelligence. Humans do not act solely according to principles of efficiency. Moral decisions are often based on empathy, value conflicts, and normative beliefs. AI systems lack moral autonomy. They optimize objective functions defined by humans. This creates a fundamental problem: while machines can compute decisions, they cannot bear responsibility. K  hl [14] also points this out.

Furthermore, AI systems systematically reproduce biases present in their training data. Numerous studies have documented algorithmic discrimination in areas such as the criminal justice

system (Kienzle et al., [15]), lending (Garcia et al., [16]), and recruitment (Köchling & Wehner [17]). The notion of neutral machine rationality thus proves to be an illusion. Human judgment is fallible, but at the same time reflective. Humans can question their own values, feel guilt, and reformulate moral principles. AI lacks such self-transcendence.

The Limits of the Scaling Logic

A dominant narrative in AI research holds that more data, more computing power, and larger models inevitably lead to greater intelligence. This scaling logic explains many current advances. However, increasing complexity does not automatically result in consciousness or general cognitive ability. To date, there is no empirical evidence that quantitative scaling produces human-like consciousness. The ability to convincingly simulate language does not mean that a system possesses self-awareness, intentionality, or subjective experience.

The assumption of an inevitable “superintelligence” is therefore often based more on extrapolated future expectations than on established scientific findings. Technological progress is real. Yet progress alone does not justify metaphysical conclusions about the replaceability of human intelligence.

Human Intelligence as an Existential Phenomenon

Perhaps the most important difference between humans and machines lies in the existential dimension of human intelligence. Humans do not think in a vacuum. They act under conditions of finitude, uncertainty, and mortality. From this situation arise meaning, responsibility, and cultural development. Human understanding is always also self-interpretation. Humans do not merely ask, “How does the world work?” but also “Why do we exist?” and “How should we live?”

AI systems do not possess such questioning of their own existence. While they can (re)produce plausible answers, they themselves have no biography, no vulnerability, and no experience of temporality. Yet it is precisely this existential dimension that could be constitutive of what we call intelligence.

Conclusion

Current developments in AI undoubtedly mark a technological turning point. Artificial systems will complement or surpass human performance in many areas. This is particularly true for data-intensive, repetitive, and formally structured tasks. However, this does not automatically imply that artificial intelligence is generally superior to human intelligence. The central weakness of many future predictions lies in a narrow definition of intelligence. Those who understand intelligence exclusively as information processing may easily regard machines as superior. However, those who consider consciousness, experience, intentionality, morality, creativity, and existential self-reflection arrive at a significantly more cautious assessment.

AI is extraordinarily powerful. But power alone is not synonymous with understanding, wisdom, or consciousness. As long as no convincing scientific theory explains how subjective

experience, semantic understanding, and moral autonomy are supposed to arise from purely statistical pattern processing, skepticism regarding the claimed superiority of artificial intelligence remains not only legitimate but scientifically necessary. Even the AI “knows” this—and, incidentally, it contributed significantly to the content of this article.

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