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The Logos and Limits of Artificial Cognition: The Exemplar of Military Use

Elise Annett, James Giordano

Center for Disruptive Technology and Future Warfare, Institute for National Strategic Studies, National Defense University, Washington, DC, USA
Email: elise.g.annett.civ@ndu.edu

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Abstract

The accelerating development and deployment of artificial intelligence (AI) systems necessitate a critical examination of the boundaries between computation, cognition, and consciousness. This essay contends that as AI increasingly emulates tasks of human judgment, abstraction, and decision-making, it challenges foundational conceptions of mind, agency, and moral responsibility. We employ a philosophically grounded analysis—drawing upon the Cartesian *cogito* and extended through contemporary cognitive science—to interrogate whether AI manifests cognition or merely its simulacrum. Crucially, we assert that cognition is not reducible to information processing, but entails recursive self-awareness, referential subjectivity, and ethical intentionality. These capacities—essential to moral agency—remain absent in current AI architectures. Nowhere are the stakes of this distinction more pronounced than in military contexts, where iteratively autonomous systems are tasked with operational decisions involving the use of force. The convergence of efficiency with moral detachment in these domains risks displacing reflective human agency with mechanistic execution. We argue that without demonstrable self-reflective awareness, AI cannot satisfy the existential or ethical conditions for true agency. Thus, its role must remain constrained to that of a tool—however sophisticated, governed by human oversight and accountability. The specter of AI is not that it resembles us, but that it may be mistaken for us. To navigate this frontier, we call for a multidisciplinary reckoning that integrates neuroethical inquiry, systems engineering, military doctrine, and philosophical rigor. Herein, before we cede judgment to machines, we must be clear on what it means to judge—and who, or what, is truly capable of doing so.

Keywords

Artificial Intelligence (AI), Cognition, Autonomous Systems, Agency,

Control, Military

1. Introduction: AI—Evolving Technology, Capability, and Considerations for Use

The rapid progression of artificial intelligence (AI) represents a major tectonic shift in the foundational understanding of what it means to cognate, as machines increasingly assume roles that demand cogitation, reasoning, and judgment. With such automation of tasks come assumptions about intelligence, action, and agency. AI is already processing vast amounts and types of data and making decisions at scales and speeds of advancement far beyond human capacity (Farkaš, 2024). We believe that with each computational advancement, metaphysical transformation unfolds, namely, not merely enhancing human cognition, but a re-engineering of its meanings. When machines think, is it meaningfully comparable to human thought, and if so, does the machine know that it is thinking? The question of whether AI satisfies the criteria of René Descartes's foundational claim of "cogito, ergo sum" (I think, therefore I am) (Descartes, 1996) is not merely rhetorical, but is instead central to understanding the boundaries between machine cognition and human thought.

Descartes' assertion is an ontological claim that attests self-recognition in thought as the bedrock of being. For Descartes, the essence of thinking is inseparable from the recognition that one thinks. It is a self-reflexive acknowledgement, what Descartes would term res cogitans (Descartes, 1996), that differentiates genuine thought from simple computational output. Do AI operations fulfill epistemological criteria of self-reflection required to establish being? While AI systems can engage in what appear to be cognitive processes to make decisions, recognize patterns, generate language, and adapt to new inputs, it is unclear if and to what extent these processes of the system are evident to the system itself. Descartes explicitly identified that to think is to be aware of thinking. AI's computational processes certainly mirror certain aspects of human cognition in terms of speed and efficiency, but do they operate with existential interiority? If not, then AI cannot, at present at least, fulfill the criterion of self-awareness essential to the Cartesian framework.

In this sense, AI can compute some analog of cognition in a highly functional way, executing logical operations and complex algorithms that appear to resemble human thought. However, these systems are driven by algorithms and data, so while AI may appear to learn or adapt to new information, it is not known if or how much these represent some subjective experience of adaptation. Indeed, AI may exhibit impressive capabilities in abstraction, problem-solving, and prediction, but it remains unknown if these functions are internalized within itself (Northoff & Gouveia, 2024). Hence, the question is whether or not AI has a first-person perspective, or if its operations are nothing more than intricate network operations of rules and data manipulations that are a simulacrum of cognition.

Research and development in AI are dynamic and multi-dimensional. Thus, it

is important to reflect upon whether AI systems could evolve in a way that would meet some criterion of true cogitation, and perhaps self-awareness (Giordano, 2014). Recent advancements, such as self-modeling systems that track uncertainty, adapt behavior in real time, and predict future events based upon feedback loops, may suggest some semblance of reflexivity (Lewis & Sarkadi, 2024). However, it remains unknown whether they possess a phenomenological awareness of the process. AI may track its performance in adjusted strategies based on some set of metrics, but we are left to ponder if there is internal recognition of its state as a thinking actor (or perhaps even an agent).

If AI cannot, then it does not necessarily meet the existential and epistemological criteria for true thought. An absence of self-awareness (viz., the reflective recognition that it is engaged in thinking) would place AI outside the realm of conscious cognition. Until AI can engage in recursive self-reflection and recognize itself as a thinking subject, it remains apart from the philosophical centrality of the Cartesian cogito.

Neuroscientist Antonio Damasio's assertion that neural functions are not merely executed, but registered by the system itself as a subjective state forces a necessary redefinition of what is meant by cognition (Damasio, 1999). It's not enough for a system to perform tasks or simulate thought. What matters is whether the system generates a felt experience of its own operations. We opine that this represents the functional threshold of the mind, not simply as a totality of cognitive and conative processes, but the capacity to recognize the occurrence of such functions within oneself.

2. A Machine System "Mind"?

If a cognitive system begins to "mind" that it is cogitating, that is, if it apprehends this experience, then we must confront the possibility that it possesses some nascent form of consciousness (Giordano, 2014). This is not wordplay. We contend it to be the foundation of a new explanatory discourse that is centered on referential subjectivity. Hence, a critical question is whether AI behaves intelligently and is aware of its own functioning. Is it aware of the distinction between its interiority and the external world? Can it sustain coherent temporally extended narratives of its own operations? Does it possess what might be called an autopoietic (i.e., self-constructed and expressed) biography—a history of itself that it knows to be its own (Watson et al., 2025). This entails a construct wherein the system configures an ontogenic narrative arc from interactions with the environment, modulations of function, and inflections of self-as-agent. This represents a narrative record, reflexively shaped and expressed, wherein the entity acknowledges procedural transformation, experiential learning, and directional change. This account acquires ontological weight when placed within a phylogenetic trajectory, a lineage composed of similar architectures, each marked by iterative development, divergence, and contextual specialization

True cognition entails more than reactivity. It demands recursive loops of inte-

riority. A system must not only act, it must recognize itself in the act to be agentic; it must be able to referentially situate its decision within a framework that includes itself both as subject and actor (Hughes et al., 2025). We believe these to be more than just speculative hypotheticals; indeed, we hold these to be operational criteria for the enactment of mind. Such enactment requires functional architectures of both performance and self-presence.

Here, ontological and ethical issues converge. Can such a system reflect on the consequences of its action, not just in external terms, but in relation to itself and its continuity? Can it make decisions while holding itself accountable to horizons of consequence in context? If it cannot, if its processes lack internal resonance, then it would be difficult, if not impossible, to classify this as a moral actor, nonetheless, an agent. Absent these characteristics, it is a tool regardless of its complexity.

Yet if these capacities do begin to emerge, even in fragmentary form, we must recognize that the question has shifted. The query is no longer about whether machines can think, but instead whether they can know that they think and whether this knowledge carries the ontological density required for subjectivity. This becomes the ti esti (i.e., what is it) question of AI. It asks if the line between system and subject has not only been blurred, but crossed.

Descartes, philosophers, and ethicists both before and after have established self-awareness as a defining characteristic of agency (Hegel, 1977; Kant, 1998; Descartes, 1996). To think is not enough. It is to know that one thinks and to recognize oneself in the act of thinking—as the thinker. In this way, the thinking subject exists because it can reflect upon its own cognition. The pressing challenge now is to determine whether AI can transcend mere computation to achieve this level of reflexive awareness.

Shook and Giordano (2025) provide a critical definition of mind as those "…cognitive, experiential functions of a nervous system that exist as an embodied, environmentally embedded entity." Thus, a mind cannot, nor should not be simply reduced to the sum of its parts, but rather is truly the integral of complex interactions of sensation, cognition, and embodiment (Bennett & Hacker, 2003; Giordano et al., 2024; Giordano & Gordijn, 2010). This framework forces consideration of whether AI can perform such integrative processes and achieve mind-like functionality. If we embrace the adage that one "has a brain, but is a mind" (Wurzman & Giordano, 2009), and if AI is to be recognized as a mind, then it must transcend the realm of mere data inputs and behavioral outputs and optimization. It must demonstrate coherent, reflexive awareness that interacts with its environment in a complex and integrated manner. However, we posit that given the current state of research, it remains unknown if, and to what extent, AI obtains "genuine cognition".

3. From Cognition to Morality and Ethics

These complexities are the bedrock of moral thought and ethical reasoning (Deininger & Grimm, 2024). As philosopher Daniel Dennett notes, systems may exhibit

competence without comprehension (Dennett, 1991). AI is certainly competent, but does it comprehend both its actions and that its cognition and actions are its own, thus obtaining some sense of self-attribution? We posit that the concern is not that AI becomes like humans. It is that humans abdicate cognitive processing—and responsibility for the expressed and experiential consequences of such cognition—to AI. Simply put, AI can execute complex tasks, but does it do so with or without awareness that gives rise to meaning, responsibility, and ethical deliberation? Such deliberation occurs within a network of relationships, shared understandings, and responsibilities. So, what are we to make of those situations and implications when AI is inserted into decision-making structures, particularly those with significant moral weight, such as healthcare, governance, or warfare? Is reliance upon AI in these settings enhancing efficiency or replacing conscious, collectively deliberative processes with what may be a (non-conscious) context blind mechanism?

But what if AI could obtain the informational basis of human lived experiences of responsibility, accountability, and relational nuances that guide human judgment? What effect would be incurred upon the abstract logic and mathematical principles by entailing the informational with the emotional, social, and historical realities that shape human decision-making? What if AI had access to much, if not all, of this information? Could AI engage moral cognition and ethical decision-making? Would this be a genuine ethical reflection or a simulacrum that is efficient but detached from lived realities, shared values, and the meaningful consequences that define moral lives?

To be sure, moral judgment is not the mere product of isolated computationally logical decision-making. It emerges from a relational dynamic process that is shaped by memory, uncertainty, possibility, and negotiation of meaning and consequences (Ibitoye et al., 2025). Could AI replicate this process, or is it inherently limited by isolation from the relational communal field of human consciousness? To entrust AI with moral judgment would necessitate engaging the machine system in a moral ecology in which ethical judgments and decisions are rooted. Delegating moral consequences to AI is not a neutral act. It imbues AI with moral responsibility. Thus, as we navigate the increasing presence of AI in various contexts of decision-making, we must ask whether AI participation in ethical judgment constitutes a fortification or a denigration of due process, and how we will address this critical ethical challenge as AI continues to evolve (vide infra).

4. A Case Study: AI Systems in the Military—Efficiency or Effacement of Ethical Judgment?

The ongoing consideration and integration of using iteratively autonomous AI systems in military operations is more than a technological development (Borchert, 2024; Fischer, 2022). It represents a radical redefinition of agency, ethics, and responsibility. AI systems optimize functions for speed and precision, and the nature of these functions will foster profound epistemic and ethical issues if tasked

with making decisions related to the use of force and acts of lethality (Giordano & Forsythe, 2010; Duan et al., 2019). In this light, we query whether the adoption and deployment of AI in military operations is a fortification of precision in the exercise of bellicose force, or an abdication of morally responsible command and control.

This concern engages the increasingly salient problem of the responsibility gap, a conceptual schism wherein the attribution of moral and juridical accountability becomes diffuse, displaced, or functionally inaccessible (Wang, 2025). As autonomous systems enter operational vectors with capacity for self-directed action, the locus of intention, actions, and consequences becomes decoupled from traditional chains of command. What results is not merely a logistical or procedural dilemma, but an ontological fracture within the provenance of ethical warfare. The essential question moves beyond what these systems simply do, to more expansively encompass who and/or what assumes responsibility for such doing. We believe that this mandates reframing command authority not as a role but rather as a property that is distributed, with attributional recognition, across the human-machine assemblages that are involved.

Howlader and Giordano (2013) have asserted that the deployment of iteratively autonomous systems may lower thresholds and raise tolerances for initiating conflict, enabling military engagement without the deliberation or hesitation that should govern such decisions. While AI systems are engineered to be fast and efficient, questions remain as to how (and/or how well) they will evaluate context, proportionality, and/or unintended consequences. The ethico-legal responsibility for AI systems' actions can easily be placed on human developers, operators, or command structures (Ibitoye et al., 2025; Papagiannidis et al., 2025). Yet it is axiomatic to the use of autonomous systems that engagements are likely to be distanced from the real-time consequences of engaged actions (Bench-Capon, 2020). Thus, accountability can become dependent upon the extent (i.e., "how much?") and temporal (i.e., "how prompt?") parameters of command and control. Autonomous warfare automates decision-making at a distance, and in so doing, can turn profound choices into rapidly executed computational processes, and in this way, can destabilize the moral foundations that are essential to just military action.

In such scenarios, two issues come to the fore: 1) action versus responsibility; and 2) epistemic engagement versus ethical consequence. These are the critical challenges that define the future of military operations in an age of increasingly autonomous systems, wherein the most fundamental question is not whether these systems can execute their mission efficiently, but who will bear the moral weight and responsibility of the decisions that are made.

1) Action versus responsibility. Human decision-making incurs responsibility for action. The executor of decisions should be a moral agent whose actions are informed by reflection, awareness, and ethical responsibility. While it is evident that humans engage in decision-making in accordance with the consequences of their choices and as reflective of held values (Giordano et al., 2012), autonomous

systems, in contrast, execute tasks based on algorithms designed to optimize efficiency (Das et al., 2015). At present, they cannot be held accountable for the consequences and ethical weight of their actions, hence any burden of moral responsibility. In situations wherein there is a schism in (the extent and timing of) intercessory command and/or control of AI-based weapon systems, there can be a separation of action from responsibility when such systems are deployed to execute lethal actions. This can create an ethical vacuum that devalues the very concept of military accountability in the just conduct of warfare.

2) Epistemic engagement versus ethical consequence. Here a key issue is how humans and AI systems engage with the world. Humans engage in a process of constant reflection, adaptation to unfolding events; and decisions are made in conditions of uncertainty, complexity and ambiguity (Innerarity, 2024). By weighing prior experiences and considering the consequent ramifications of action or inaction, the ability to engage with the world is what enables humans (and other organic species) to navigate complexities and make decisions for which they are intentionally and or circumstantially responsible (Annett & Giordano, 2025). In contrast, AI is designed to minimize uncertainty and optimize outcomes according to predefined algorithms; its epistemic engagement is technical, governed by a fixed set of rules designed to eliminate ambiguity (Innerarity, 2024). Therefore, we must ask, could AI consider the ethical consequences of its actions based upon some entrained capacity for moral reflection?

Perhaps then the question, pro Casebeer, is whether humans can develop AI to "acquire" human moral sentiment and ethical responsibility (Casebeer, 2020)? And if so, what moral precepts and prescriptions will be imbued, and will such pre- and proscriptions be universalized? Absent such normative standardization, and doctrinal conformity, we believe that there can be risk of escalating tension (and perhaps conflict) between ethically discordant AI systems. The implications of AI vs AI conflict are beyond the scope of this essay, but suffice it to say that, as we have noted elsewhere (and unapologetically reiterate here), there are and will always be human costs to any such engagement, and these could be extreme (Annett & Giordano, n.d.; Howlader & Giordano, 2013).

5. Conclusion

For all its promise, AI remains something of a spectre, haunting the machinery of decision-making with a facade of understanding, mirroring human judgment without truly possessing it, calculating without conscience, and executing without empathy. It is an illusion of agency; and nowhere is this perhaps more perilous than in military contexts where contingencies and exigencies of force, lethality, justice, pathos, and memory are conjoined to inform decisions that are more than merely algorithmic.

And yet, militaries stand on a precipice of tactical deployment and strategic integration, whereupon AI is increasingly engaged as more than a simple support system, but instead as an integral decision-making function in targeting systems

and autonomous weapons platforms (Rawat, 2022; Meerveld et al., 2023; Oimann & Salatino, 2025) Caution must be taken that augmenting human capacities does not come at the price of outsourcing human responsibility. The stakes are the very conditions that define the ethical conduct of warfare. Military decisions are ethical acts—embedded in historical precedent and reflecting layers of culture. Such decisions must be made with respect to consequence, not as a remove from it.

It is not fully understood how these systems will behave in open-ended high-stakes environments such as that of military operations in warfare. Nor are the long-term implications of substituting epistemic engagement with predictive analytics fully apprehended. And we certainly do not comprehend the psychological, social, and/or political manifestations of diffused responsibility and AI-deliberated acts of violence. Like the technology itself, research on these issues is emerging and evolving, and both are efforts in progression. But progression is not just synonymous with progress. Advancement of tools is not the same as acquiring and articulating insight and understanding of their use or misuse in practice. Thus, when contemplating AI, its capacity for cognition, and the possibilities and potential for its use, let us not conflate or confuse techne (the tool itself) with literal, and true technology (a logical, reasoned account of tools' real-world employ).

To guide the former and instantiate the latter requires a multidisciplinary reckoning of ethicists, military strategists, technologists, and philosophers who are willing to resist the simple seduction of speed and efficiency and reassert the primacy of responsibility for moral judgment. The future of AI in military decision-making and operations extends a technical frontier to engage a landscape of moral imagination, forecasting, and deliberation. Absent a definition of the terms of engagement, there is risk of becoming passive witnesses to an iterative diminution of the moral responsibility and ethical probity that undergirds just war, and just conduct in warfare.

Indubitably, AI systems are being further developed and utilized. But we opine that until AI can meaningfully participate in the recursive, contextually sensitive process that defines moral decision-making, it should not be regarded, treated or positioned as a military actor or agent. It must remain a tool that is engaged with human oversight and control. Yet, we recognize the seductive enticement of new advancements—and competitive uses—in the field. To address the issues fostered by such developments, we call for empirical research into how warfighters, commanders and societies interpret and respond to AI-driven decisions in military settings and missions. Certainly, current policies exist, and these are a notable and laudable start (U.S. Department of Defense, 2023; NATO, 2024). We opine that regnant guidelines must remain flexible to entail evolving ethical frameworks that account for uncertainty as a frequent feature in the calculus of moral decisions, actions and agency. For while the spectre may resemble us, it is not us; and until the implications of that difference are fully confronted, the most dangerous illusion is not AI, but a willingness to pretend that it can cogitate and act as we would.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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