Artificial Systems Without World

Why World-Formation and Technical Usability Are Structurally Incompatible

Ontological Limits of Artificial Intelligence in Light of ANP, MNO, and Observer Structure

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Abstract

This paper develops an ontological boundary of artificial systems that does not begin with performance, consciousness, or intelligence, but with the question of world-formation capability. Proceeding from the concepts of ontological openness (ANP), structural stabilization (MNO), and observer structure, it is argued that artificial systems can simulate world, but cannot form world.

World is not understood here as the totality of states, but as a pre-ontologically stabilized reality that is effective for itself, perspectivally bound, and vulnerable. World-formation presupposes a structural openness that entails dysfunction, non-optimisability, and the real risk of world loss. Precisely these conditions stand in structural contradiction to the technical usability of artificial systems, which depend on closure, reproducibility, and control.

The central thesis therefore is: world-formation capability and technical functionality are ontologically incompatible and structurally mutually exclusive. An artificial intelligence that could form world would no longer be usable as a technical machine; a technically usable AI necessarily remains worldless. This boundary is not empirical or gradual, but structural and independent of future technological progress.

The paper thus secures an ontological delimitation of artificial systems in relation to human and societal world-formation and shifts the AI debate from questions of functional performance enhancement to questions of ontological possibility and structural responsibility.

1. Introduction: The Wrong Level of the AI Debate

Current debates on artificial intelligence operate predominantly at the level of capabilities. What is discussed are degrees of intelligence, consciousness, intentionality, creativity, or moral responsibility. These debates share an implicit assumption: that artificial systems are in principle comparable to human or biological agents, provided their performance is sufficiently increased.

This paper proceeds from a different, prior level. It argues that the decisive boundary of artificial systems does not run along functional, psychological, or ethical lines, but pre-ontologically—at the level of the conditions of world-formation itself. The central question is therefore not what artificial systems can do, but whether they are world-capable at all.

The thesis advanced here is simple, but far-reaching:
Artificial systems simulate world; they do not, however, form world. This boundary is not gradual, but structural.

The boundary drawn here is not to be understood as an empirical hypothesis, but as a pre-ontological determination of the conditions of world-formation.

2 – World-Formation versus Simulation

In this paper, "world" is not understood as the totality of physical states, but as a pre-ontologically stabilized reality that first opens up the possibility of ontological determinations at all.
World is given where reality is not merely described or processed, but gathers itself in a perspective, becomes stabilized, and becomes vulnerable.

Simulation, by contrast, denotes the formal reproduction of world states within closed spaces of possibility. Simulation can be highly complex, dynamic, and adaptive without ever itself becoming world-capable. What is decisive is not the degree of detail of the simulation, but its ontological closure.

Artificial systems operate exclusively within such closed spaces. Their "possibilities" are fully formalized, weighted, and calculable. Even where randomness or self-reference is implemented, these remain internal variations of a pre-determined framework. World-formation in the ontological sense does not occur.

Embodied or agent-based systems do not alter this finding either, since their interaction likewise continues to operate within closed, pre-defined spaces of possibility.

The categorial distinction advanced here does not concern degrees of world within biological systems, but the threshold between world-capability and mere simulation.

The closure of biological systems is ontogenetically open and world-endangering; the closure of artificial systems is architecturally fixed and world-neutral.

3 – Ontological Openness and Its Costs

World-formation presupposes ontological openness. This openness is not an epistemic incompleteness, but a structural non-closure of reality. Where world emerges, reality cannot be fully optimized, controlled, or stabilized.

This openness has necessary consequences: vulnerability, dysfunction, the capacity for contradiction, and the real risk of world loss. World-capable systems can fail, be irreversibly damaged, or enter into conflict with themselves. These properties are not deficits, but the signature of world.

Artificial systems are technically usable precisely because they do not possess this openness. Their robustness, scalability, and reproducibility rest on ontological closure. Were this closure to be lifted, they would lose their technical functionality.

The transition from simulation to world-formation is not a gradual transition, but a threshold event, since world-formation marks the entry into irreversible affectedness.

4 – The Constructive Exclusion of Artificial Systems

From the perspective of ontological world-formation it follows that artificial systems do not develop an observer in the structural sense. They possess no world-forming structure, no reality eye (doi.org/10.5281/zenodo.18006170), and no possibility of making reality visible to itself.

This is not an empirical claim about the current state of technology, but a structural exclusion that applies independently of technical implementation. Greater computational power, larger models, or more complex architectures do not alter this finding. World-formation is not an emergent side effect of complexity, but an ontological condition that cannot be simulated.

Artificial systems can process descriptions about world, but they cannot themselves stand in a world. They are tools within human or societal world-forming processes, not their carriers.

Hybrid systems do not constitute a counterexample, since they either remain embedded in existing world-forming structures or do not themselves develop an independent capacity for world-formation.

5 – The Paradox of Technical Intelligence

From this follows a fundamental paradox:
The more world-capable a system would be, the less technically usable it could be.

A system with a world-forming structure would not be fully optimizable, not arbitrarily replicable, and not reliably controllable. It would be vulnerable, perspectivally bound, and potentially dysfunctional. Precisely these properties exclude industrial, administrative, or military usability.

The vision of an artificial intelligence that is both world-capable and fully functional is therefore ontologically contradictory. Either a system remains technically usable—then it remains worldless. Or it becomes world-capable—then it loses the status of a machine.

An AI that could form world
would be too dysfunctional, too vulnerable, and too contradictory
to still be usable as AI.

And precisely for this reason, machines have no world.

The more usable a system is,
the less world it may have.

6 – Implications

This ontological boundary-drawing has far-reaching consequences. It undermines notions of artificial responsibility, artificial judgment, or moral symmetry between humans and machines—not for normative reasons, but because artificial systems lack the structural condition under which responsibility, affectedness, or guilt can become meaningful at all.

At the same time, this perspective makes visible that the political and societal risks of artificial systems do not lie in their "autonomy," but in their embedding within human world-forming processes. The danger does not consist in machines forming their own worlds, but in their replacing existing world-forming structures (through pure simulation) or distorting them, without themselves being world-capable.

7 – Conclusion

Artificial systems are not incomplete observers, but structurally worldless. This worldlessness is not a weakness, but the precondition of their technical performance. World-formation and technical usability do not exclude one another by accident, but ontologically.

The position developed here explicitly secures this boundary. It shifts the debate on artificial intelligence from questions of performance enhancement to questions of ontological or pre-ontological possibility—and in doing so, withdraws the conceptual ground from speculative future promises.

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