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WHY INTELLIGENCE IS NOT ENOUGH: HOMEOSTASIS, AFFECT, AND THE BIOLOGICAL GROUND OF CONSCIOUSNESS

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ABSTRACT

Recent advances in artificial intelligence have intensified a long-standing philosophical temptation: the identification of intelligent performance with conscious existence. Systems capable of sophisticated reasoning, linguistic fluency, and adaptive learning are increasingly seen as challenging the traditional boundaries between artificial cognition and human mentality. This article resists conflation by arguing that intelligence and consciousness belong to fundamentally distinct ontological categories. Intelligence concerns functional competence and behavioral success; consciousness concerns subjective experience structured by affect, vulnerability, and intrinsic normativity. Drawing on Antonio Damasio's biologically grounded account of the mind, the article defends the thesis that consciousness is not an emergent property of information processing; rather, it is a regulatory achievement of living systems engaged in homeostatic self-maintenance. Consciousness, on this view, arises from the organism's ongoing effort to preserve its own existence, and is inseparable from affective valuation. What it is like to be conscious is inseparable from the fact that things can genuinely go better or worse for the subject who experiences them. The argument is developed through critical engagement with dominant positions in contemporary philosophy of mind. Functionalist approaches, as exemplified by Dennett, have been shown to explain intelligent behavior at the cost of neutralizing normativity. Property-dualist accounts, such as Chalmers's, preserve phenomenality while detaching it from biological explanation, thereby rendering the systematic link between consciousness and life explanatorily inert. Embodied and extended cognition theories expand the scope of cognition without adequately accounting for the emergence of subjectivity. In contrast to these alternatives, Damasio's framework offers a naturalistic yet normatively robust account of consciousness, grounding phenomenality in biological vulnerability rather than in computational complexity. Extending this framework to artificial intelligence, the article argues that artificial systems—lacking genuine homeostasis, mortality, and existential stakes—cannot instantiate consciousness, regardless of their level of performance. This limitation is ontological rather than technological. Consciousness does not scale with intelligence; rather, it arises from the precariousness of life. The article concludes by defending ontological sobriety in debates about artificial minds, emphasizing that recognizing the limits of design is necessary for conceptual clarity rather than being a failure of philosophical imagination.

KEYWORDS: Consciousness, Artificial Intelligence, Homeostasis, Normativity, Embodiment, Antonio Damasio.

1. CONSCIOUSNESS BEYOND COGNITIVE PERFORMANCE

Contemporary philosophy of mind is increasingly organized around a tension between two explanatory ambitions that are often tacitly conflated. On the one hand, there is the project of explaining cognition in functional, computational, or informational terms. On the other hand, attempts have been made to account for consciousness as subjective experience, characterized not merely by representational content but also by affective salience, concern, and normativity. Although these projects are frequently treated as continuous, recent developments in artificial intelligence reveal a growing gap between them. Systems capable of linguistic fluency, strategic reasoning, and adaptive learning now routinely exhibit behaviors that, from an external standpoint, resemble human intelligence. This resemblance has encouraged the assumption that sufficiently advanced cognitive performance may suffice for consciousness.

This article rejects that assumption. The central claim advanced here is that intelligence and consciousness belong to distinct ontological categories. Intelligence is the capacity to generate contextually appropriate outputs given inputs and goals. Consciousness, by contrast, refers to the presence of subjective experience, structured by affect, vulnerability, and concern for one's own condition. A system may behave intelligently even if nothing matters to it. This possibility is not merely conceptual; it is instantiated by contemporary artificial systems whose outputs increasingly rival those of human agents. The persistence of this asymmetry reveals a foundational error in accounts that equate intelligence with mindedness. This distinction echoes Nagel's classic formulation of consciousness as essentially tied to a first-person perspective, irreducible to any third-person functional or behavioral description (Nagel, 1974, pp. 435–436).

The distinction between intelligent performance and conscious existence is often obscured by behavior-centered methodologies. Functional success is taken as evidence of inner experience, while the absence of experience is dismissed as epistemically inaccessible. However, this inference rests on an implicit anthropomorphism. Human intelligence is inseparable from consciousness, not because intelligence logically entails experience, but because it is embedded in biological systems whose survival depends on affective regulation. Once this embedding is removed, the link between intelligence and consciousness dissolves.

This article argues that consciousness is not an emergent property of information processing per se,but rather a biologically grounded phenomenon arising from homeostatic regulation in living systems. Because consciousness is inseparable from life, it is likewise inseparable from affective valuation. Its primary function is not to enhance problem-solving or behavioral efficiency, but to make the organism's own existence matter to itself. Conscious experience is the lived manifestation of the organism's ongoing effort to maintain internal viability in the face of perturbation (Damasio, 1999, pp. 141–146).

This claim has significant implications for artificial intelligence. If consciousness is grounded in biological homeostasis, no amount of computational sophistication alone can generate it. The absence of consciousness in artificial systems is not a temporary technological shortcoming, but an ontological consequence of their design. This does not entail that artificial systems are epistemically trivial or ethically irrelevant. It entails only that consciousness is not coextensive with intelligence.

The theoretical framework guiding this argument is developed by Antonio Damasio, whose work integrates neuroscience, evolutionary biology, and philosophy into a unified account of mind and consciousness. Damasio's core thesis that feeling is the experiential correlate of homeostatic regulation provides a principled way to explain why consciousness reliably arises in living systems and why it remains absent in artificial ones (Damasio, 2010, pp. 6–9). By situating consciousness within the biological logic of self-maintenance, Damasio avoids both functionalist reduction and metaphysical inflation.

The purpose of this article is therefore twofold. First, it situates Damasio's position within contemporary philosophy of mind by critically engaging with functionalist, dualist, and embodied approaches. Second, it extends Damasio's framework into the philosophy of artificial intelligence, arguing that current and foreseeable AI systems lack the ontological conditions required for consciousness. This is not a claim about technological pessimism; rather, it concerns the nature of value, normativity, and lived existence.

2. THEORETICAL LANDSCAPE: COMPETING ACCOUNTS OF CONSCIOUSNESS

2.1 Functionalism and the Neutralization of Value

Functionalist theories of mind, most prominently articulated by Daniel Dennett, define mental states in terms of their causal roles within a cognitive system.

On this view, if a system discriminates stimuli, integrates information, guides behavior, and produces appropriate verbal or behavioral reports, then attributing consciousness to it is justified(Dennett, 1991, pp. 72–75).Chalmers's formulation of the "hard problem" underscores precisely this gap between functional explanation and subjective experience, yet by treating consciousness as ontologically fundamental, it risks transforming this gap into an explanatory endpoint rather than a phenomenon in need of biological grounding(Chalmers, 1996, pp. 80–83).The appeal of functionalism lies in its methodological parsimony and its compatibility with the computational sciences. Consciousness is not treated as a mysterious inner glow, but as a pattern of functional organization. Dennett's later defense of heterophenomenology reinforces this stance by treating reports of experience as data to be explained without ontological commitment to phenomenality itself, thereby deepening the gap between behavioral explanation and lived experience(Dennett, 2005, pp. 98–101).

However, this apparent parsimony conceals a significant theoretical cost. Functional descriptions explain how states are causally related, but they do not explain why any state should matter to the system itself. Functional roles are value-neutral. A system may avoid damage or pursue goals without those outcomes having intrinsic significance for it. Dennett's dismissal of qualia as theoretically dispensable illustrates the functionalist tendency to treat first-person experience as an explanatory residue, something to be explained away once behavioral and informational accounts are complete(Dennett, 1991, pp. 366–369).The system behaves as if something were at stake, but, in fact, nothing is at stake. While enactivist approaches emphasize the continuity between life and mind, Thompson's biologically informed phenomenology still leaves open whether normativity alone suffices for phenomenality, a question Damasio answers by grounding experience specifically in affective homeostatic feeling (Thompson, 2007, pp. 145–148).

Damasio's critique targets this omission directly. By abstracting away from biological vulnerability, functionalism explains intelligent behavior while leaving consciousness ontologically ungrounded. Consciousness, on Damasio's account, is inseparable from concern, and concern is inseparable from the organism's need to preserve its own integrity (Damasio, 1999, pp. 36–39). Functionalism, by contrast, treats concern as optional—a feature that may be simulated without being instantiated.

Attempts to reintroduce value through reward functions or optimization criteria fail to resolve this issue. Such values are externally imposed and instrumentally defined. They do not originate within the system as expressions of its own viability. Consequently, functionalism risks explaining cognition at the cost of explaining consciousness away. It offers a theory of doing without a theory of being.

2.2 Property Dualism and Explanatory Detachment

In response to the limitations of functionalism, David Chalmers proposes a radically different approach. By distinguishing the "easy problems" of cognition from the "hard problem" of consciousness, Chalmers argues that subjective experience cannot be reduced to physical or functional processes at all(Chalmers, 1996, pp. 80–83).Consciousness, on this view, must be treated as a fundamental feature of reality. Even in his later refinements, where Chalmers emphasizes the structural and epistemic features of conscious experience, phenomenality remains decoupled from the biological conditions under which it arises, preserving the ontological gap rather than explaining it(Chalmers, 2010, pp. 15–18). While this move preserves the irreducibility of phenomenality, it does so at the cost of explanatory integration. Consciousness becomes ontologically detached from the biological conditions under which it reliably arises. The systematic correlation between consciousness and living systems remains unexplained. From Damasio's perspective, this represents an abdication rather than a solution. Consciousness is not something that merely accompanies life; it is an adaptive development within it.

By grounding consciousness in homeostasis, Damasio avoids the metaphysical inflation characteristic of property dualism. Consciousness is not fundamental; it is necessary. It arises because organisms must evaluate their internal states with respect to survival. Phenomenality is thus explained, not merely asserted (Damasio, 2010, pp. 3–7).

2.3 Embodiment Without Normativity

Clark's proposal to "supersize" the mind by extending cognitive processes into body and environment successfully undermines brain-bound internalism, yet it remains silent on the conditions under which such extended processes would acquire intrinsic value or felt significance(Clark, 2008, pp. 76–78).Embodied and extended cognition approaches, exemplified by Andy Clark, reject Cartesian internalism by emphasizing sensorimotor

coupling and environmental scaffolding(Clark, 2008, pp. 76–78).These approaches successfully challenge the idea that cognition is confined to the brain. However, they do not resolve the problem of consciousness. Cognitive processes may extend into tools and environments, but experience does not extend into them. Clark's later clarification that the extended mind concerns epistemic access rather than subjective ownership reinforces this limitation: extension may alter what a system can do or know, but not what it is like to be that system(Clark, 2015, pp. 3764–3766).

Damasio's framework clarifies why. Consciousness remains anchored in the biological core of the organism, where homeostatic regulation generates affective valuation. Extension enhances intelligence, not subjectivity. Without vulnerability, extension remains normatively inert. Even strong sensorimotor accounts, such as Noë's enactive theory of perception, while successfully rejecting representational internalism, stop short of explaining why perceptual coupling should give rise to felt significance rather than mere skillful access (Noë, 2004, pp. 226–228).

3. WHY DAMASIO? A METHODOLOGICAL JUSTIFICATION

Antonio Damasio's relevance to contemporary philosophy of mind does not stem merely from his neuroscientific credentials, but rather from the distinctive methodological posture that structures his account of consciousness. Damasio's early critique of Cartesian separation already anticipates this point by showing that reason itself depends on affective bodily signals, without which decision-making collapses into pathological indifference (Damasio, 1994, pp. 165–167). Unlike both strong reductionist programs and metaphysically inflationary responses to the hard problem, Damasio advances a biologically grounded framework that treats consciousness as an emergent, yet explanatorily continuous, feature of living systems. The guiding intuition of this framework is that consciousness is not an epistemic add-on to cognition, but an ontological development rooted in the regulatory demands of life itself.

At the methodological core of Damasio's work lies a rejection of the idea that cognition can be adequately understood in abstraction from affective and bodily processes. Standard computational and functionalist approaches typically begin with information processing and subsequently attempt to account for consciousness either as a higher-order representation or an emergent informational property. Damasio reverses this order. For him, the primordial fact is not representation, but regulation: the continuous effort of an organism to maintain its internal milieu within viable bounds (Damasio, 1999, pp. 36–39). Cognition, on this view, is developmentally and conceptually downstream of affective regulation rather than its foundation.

This inversion has significant methodological consequences. By situating consciousness within the dynamics of homeostasis, Damasio avoids the explanatory gap that plagues both functionalist and dualist theories. Conscious experience is not posited as an ontologically primitive feature of the universe, as in property dualism, nor is it reduced to behavioral or computational dispositions. Instead, phenomenality is treated as the experiential manifestation of value-laden regulatory processes. What it is like to be an organism is inseparable from the fact that the organism's states can be better or worse for it.

The concept of normativity is central in this context. Functionalist models typically treat normativity as externally specified: goals, rewards, and error conditions are defined relative to an observer or designer. Damasio's account, by contrast, locates normativity internally, in the organism's own struggle to persist. Homeostatic regulation is not merely causal; it is evaluative. Deviations from viability thresholds are registered as good or bad for the organism, and it is precisely this evaluative dimension that gives rise to affect and, eventually, to conscious feeling (Damasio, 2010, pp. 3–7).

This internalization of normativity provides a principled response to a recurring objection, namely that appeals to biology merely restate the problem rather than solve it. On Damasio's account, biology is not invoked as a brute fact, but as a structured explanatory domain in which vulnerability, mortality, and historical continuity play constitutive roles. Consciousness is not simply correlated with life; it is intelligible as an adaptive response to the precariousness of living systems. A being for whom nothing can fundamentally go wrong has no need for experience. The intimate link between life, vulnerability, and normativity has a longer philosophical lineage in the tradition of philosophical biology, most notably in Jonas's claim that metabolism itself already introduces a primordial form of concern and self-relatedness(Jonas, 1966, pp. 80–83).By explicitly linking affect to value and ethical orientation, Damasio extends the homeostatic framework beyond mere survival, showing how feelings ground

evaluative perspectives long before reflective cognition emerges(Damasio, 2003, pp. 23–26).

Importantly, Damasio's framework does not collapse into a crude form of biological essentialism. The claim is not that carbon-based life is metaphysically privileged, but that consciousness requires a form of self-concern that arises only under conditions of genuine existential risk. This distinguishes Damasio's position from certain strands of embodied cognition, which emphasize bodily interaction without adequately accounting for why such interaction should generate subjectivity rather than mere adaptive behavior (Damasio, 2018, pp. 207–210).

Methodologically, then, Damasio offers a model that is simultaneously naturalistic and normatively robust. Consciousness is explained without being trivialized, and value is grounded without recourse to metaphysical primitives. This makes his framework uniquely suited to address questions at the intersection of philosophy of mind and artificial intelligence, where the temptation to equate intelligence with consciousness remains particularly strong.

4. ARTIFICIAL INTELLIGENCE, HOMEOSTASIS, AND ONTOLOGICAL LIMITS

The application of Damasio's framework to artificial intelligence exposes a persistent conceptual confusion in contemporary discourse: the conflation of intelligent performance with conscious existence. Advances in machine learning have produced systems capable of linguistic fluency, strategic planning, and adaptive optimization. These capacities, impressive as they are, have encouraged the assumption that consciousness may emerge once a sufficient threshold of complexity is crossed. Damasio's account directly challenges this assumption by drawing a sharp ontological distinction between performance and experience. The emergence of a core self, on Damasio's account, depends on the continuous mapping of bodily states relative to the organism's own viability, a process that cannot be replicated by systems lacking lived bodily continuity (Damasio, 2010, pp. 253–256).

Performance is defined by externally observable success conditions. A system performs intelligently if it reliably produces outputs that satisfy specified criteria relative to inputs and goals. Consciousness, by contrast, is defined by internal significance. It is not a matter of what a system does, but of whether anything matters to the system itself. This distinction cannot be captured in purely functional terms because functional descriptions abstract away from the question at issue.

Central to this critique is Damasio's distinction between emotion and feeling. Emotions are patterns of physiological and behavioral response that serve regulatory functions; feelings are the conscious experience of those patterns as states of the self(Damasio, 1999, pp. 42–45).While artificial systems can model emotional responses and even generate affective simulations, they lack the bodily substrate required for feelings. No internal milieu exists whose perturbation is experienced as either a threat to, or a benefit to, continued existence.

Proposals for artificial homeostasis attempt to bridge this gap by endowing machines with self-regulatory mechanisms. However, such proposals fail to appreciate the ontological depth of biological homeostasis. In living organisms, regulation is inseparable from mortality. Failure is not a local error but rather an existential termination. Artificial systems, by contrast, can be repaired, reset, or duplicated without loss of identity. Their regulation is therefore instrumental rather than existential (Damasio, 2010, pp. 255–258).

This difference has profound implications for subjectivity. Consciousness presupposes a first-person perspective anchored in historical continuity. An organism's experiences are significant because they are part of a life that unfolds irreversibly over time. Artificial systems lack this temporal ownership. Even when they maintain internal state models, those states are not experienced but are processed. There is no experiential cost of failure; there is only a system-level adjustment. Enactive models of autonomy and sense-making emphasize organizational closure and adaptive regulation, yet even these accounts acknowledge that artificial systems instantiate only a weak form of normativity, lacking the existential stakes characteristic of biological life(Di Paolo et al., 2017, pp. 52–55).

Attempts to circumvent this objection by appealing to future technologies such as artificial mortality, irreversible learning, or self-modifying architectures miss the point. The issue is not whether artificial systems can be made more complex or autonomous, but whether they can instantiate intrinsic normativity. Without genuine vulnerability, normativity remains derivative. What appears to be a concern is, upon analysis, a projection of human interpretive frameworks onto value-neutral processes.

Damasio's framework thus establishes an ontological limit, not a technological horizon. Consciousness does not scale with computational

power, nor does it emerge from complexity alone. It arises from the lived necessity of self-regulation in a world in which existence is at stake. Damasio's later work further reinforces this position by situating consciousness within a broader evolutionary narrative in which feelings precede culture and cognition, functioning as regulators of life before becoming vehicles of meaning (Damasio, 2018, pp. 210–214).

5. CONCLUSION: ONTOLOGICAL SOBRIETY AND THE LIMITS OF DESIGN

The preceding analysis has argued for a principled separation between intelligence and consciousness, grounded in an account of mind that takes biological vulnerability and affective normativity seriously. By situating consciousness within the dynamics of homeostatic regulation, Damasio offers a model that preserves the reality of subjective experience without detaching it from the natural world.

This model has significant implications for contemporary debates in artificial intelligence. It undermines the assumption that consciousness is an engineering problem solvable by increased complexity or improved architecture. Consciousness is not a feature that can be added to a system once certain functional benchmarks are met. It is the experiential expression of a form of existence in which survival, breakdown, and loss are real possibilities for the system .

Recognizing this limitation is not an act of pessimism, but of ontological clarity. Artificial systems can and will continue to surpass humans across many performance domains. They may reason, predict, and optimize with superhuman efficiency. What they will not do, on Damasio's account, is care. They will not experience their own states as good or bad, nor will their existence matter to them internally.

This conclusion does not diminish the ethical or social importance of artificial intelligence. On the contrary, it sharpens. By resisting the anthropomorphic temptation to ascribe consciousness where there is none, we preserve the conceptual resources needed to understand both the power and the limits of artificial systems. Ontological sobriety, in this sense, is not a retreat from philosophical ambition, but rather a condition of its success.

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