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AI and the human condition: between evolutionary continuity and ontological rupture

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Πολλὰ τὰ δεινὰ κοὐδὲν ἀνθρώπου
δεινότερον πέλει
Many are the astonishing things,
but none is more astonishing/terrible[1] than man
Sophocles, Antigone, first stasimon

Between apocalypse and integration: framing the ai debate

The contemporary debate on artificial intelligence (AI) appears to oscillate between two extreme narratives: the 'apocalyptic' and the 'integrated', to quote Umberto Eco (1986). On the one hand, there is the apocalyptic view: AI is seen as a radical ontological rupture and an existential threat that could replace or annihilate us; the ultimate fulfilment of a destiny of technical alienation that began with the advent of modernity. In contrast, the integrated or continuist interpretation views AI as the latest in a long line of cognitive extensions that have characterised the biological and cultural evolution of our species since its earliest origins.

Actually, artificial intelligence presents both elements of continuity and rupture. To grasp the nature of AI and its anthropological significance, it is necessary to move beyond the dichotomy. This requires a double shift of perspective: backwards, toward the philosophical genealogy of our suspicion toward technology; and backwards further still, toward the deep-time evolutionary processes through which the human mind emerged in a technical and cultural environment it actively constructed.

The philosophical genealogy of distrust towards AI, a cornerstone of the apocalyptic vision, can be summed up in one word: nihilism. Nietzsche ([1878] 1996a) interprets nihilism as the progressive devaluation of the real world in favour of idealised, abstract and comforting alternatives. According to Nietzsche, this process began with Plato's idealistic metaphysics and culminated in Christian morality. However, subsequent thought, especially that of Heidegger, gave this diagnosis a decisive twist: rather than being understood as the moral devaluation of the sensible world, nihilism is now seen as the 'forgetting of Being'. Postulating an original unveiling of Being that has been progressively concealed by metaphysical tradition, Heidegger identifies modern technology as the extreme fulfilment of this obscuration (Heidegger [1954] 1977). Thus, *Technik* (in contrast to the ancient τέχνη) becomes, for Heidegger, the principle of the nihilistic devaluation of Being: the *Gestell* that transforms the world into a means of calculation, nature into a resource, existence into a performance, humans into entities that can be manipulated, and individuals into operational functions that are no longer ends in themselves, but merely means to an end.

This apocalyptic vision of modern technology has had a profound influence on contemporary thought. Authors such as Severino (2016), Agamben (1998), Ellul (1964) and Anders (2016) have adopted and frequently exacerbated the notion that technology possesses an

[1] *In Greek, δεινότερον has both meanings

autonomous, impersonal dynamic that can transform humans into mere cogs in its own machinery. According to these interpretations, technology is not merely a tool under human control, but rather a systemic, totalising force that progressively robs us of freedom, meaning, and the capacity to act and think. This compelling perspective has often been improperly conflated in public debate with Marxian concepts of alienation and reification, despite sharing only superficial formal similarities (Marx [1840] 1975). The Marxian critique of exploitative social relations has been reinterpreted as a metaphysical condemnation of technology itself. The result is a problematic theoretical hybrid, whereby human reification is seen as arising not from historical labour organisation and power dynamics, but from technology itself, as if every instrumental mediation inevitably entails dehumanisation.

It is in this context that many contemporary fears and criticisms of artificial intelligence have emerged. If technology is conceived as an alienating fate that strips meaning, then AI becomes its inevitable culmination, the ultimate device of human expropriation. Narratives about 'technological singularity', hostile general intelligence or human replacement flourish in an imaginary predisposed to interpreting every technical innovation as a further step towards the loss of meaning, authenticity and humanity.

There is a certain irony in this. As previously mentioned, for Marx, reification, the reduction of humans to things and commodities, does not stem from technology itself, but from particular historical forms of labour organisation and the exploitative relationships underlying them (Marx [1867] 1976). It is this social structure, not the machine, that is dehumanising. For Marx and Engels, technology is never an alien force dominating us from outside; rather, it is a dimension that has co-originated with human evolution and history. It does not represent a fall from an imaginary original and authentic state, but rather the pristine of our existence. In the essay *The Part Played by Labour in the Transformation from Ape to Man* (Engels [1876] 1987), Engels was particularly explicit, arguing that technology is a prerequisite for human evolution. The famous phrase 'the hand is not only the organ of labour, it is also the product of labour' means that there is no ideal pre-technological humanity; humans emerge alongside tools through action. This was a visionary thesis at the time, as tools help to transform the body, mind and behavioural ecology through long selective pressure. Although this idea remained marginal in philosophical debate, it has since become a cornerstone of contemporary science regarding human origins once appropriately updated.

Extension and unburdening: the deep logic of tools

Turning to the continuity aspect of AI's evolutionary heritage, it is clear that *Homo sapiens* is fundamentally a technical species. Our evolutionary history is inextricably linked to tool use, cognitive offloading and the creation of cultural environments that influence biological evolution. A process known in biology as gene-culture coevolution (Odling-Smee et al. 2003; Richerson and Boyd 2005). In this profound sense, artificial intelligence is part of a long history of cognitive technologies that have progressively transformed human agency and thought.

The continuist hypothesis is based on the idea that artificial intelligence, ranging from large language models (LLM) and multimodal agents to robotics and other unpredictable forms, is a technological tool, however advanced (Russell and Norvig 2010). As such, its primary function is operational: its usability stems from the extremely varied and versatile tasks it performs, which may reach near-autonomous levels without implying consciousness or subjectivity. Put simply, a tool is any object selected or produced to modify the relationship between an agent and its environment in a purposeful and advantageous way. It is through this relationship that humans have constructed their world-environment, on which they depend entirely for survival. AI fully fits this functional logic, reproducing two structural features that have characterised technology throughout

human history: i) it extends the organism's natural capacities, expanding its range, precision, perception, prediction, memory and cognition; ii) it relieves the agent of part of its operational and cognitive load, exempting it from burdensome or impracticable tasks and opening up possibilities that would otherwise be inaccessible.

Thus, *extension* and *unburdening* (relief) allow us to read AI as a modern technology inscribed in evolutionary continuity with the technical knowledge that has been developed since Paleolithic times. Understanding this continuity requires an examination of technology's origins, when Paleolithic artefacts began to transform the relationship between the body, the environment, and the cognition.

Every tool, including artificial intelligence, can be described as an extension of the body or one or more of its functions, including cognitive ones. Jorge Luis Borges expressed this insight with rare clarity in one of his lecture: "Among man's various tools, the most astonishing is, undoubtedly, the book. The others are extensions of his body. The microscope and the telescope are extensions of his sight; the telephone is an extension of his voice; then there are the plow and the sword, extensions of his arm. But the book is something else: the book is an extension of memory and imagination" (Borges 1980). Although Borges spoke of modern instruments, this intuition captures a fundamental trait of technology from its origins: every artifact extends the body while simultaneously redistributing its functions, reorganizing how the organism relates to its natural and social environment. This remarkably coincides with anthropologist and archaeologist André Leroi-Gourhan's theory in *Gesture and Speech* (1993). The tool prolongs a biological function to the extent that "the hand ceases to be a tool to become an engine," because the action no longer occurs solely in the body but through external matter incorporated into the functional system mind + body + tool. To the previous definition of a tool as an object selected or modified to achieve an advantageous purpose, one must add, following Leroi-Gourhan, a crucial element: the tool extends and externalizes part of the motor and technical activity that would otherwise entirely burden the body.

A crucial connection arises here, brought forward by contemporary cognitive sciences within the framework of the '4E' perspectives (*Extended, Embodied, Embedded* and *Enactive*) (Varela et al. 1991). The extension provided by the tool is not merely an addition, but a prosthesis that integrates with the body-brain-environment system and remodels it. Once the object has been incorporated into regular use, it is no longer considered external to the subject, but becomes part of their perceptual and cognitive system, thereby modifying perception, anticipation, decision-making and action. Tool-mediated actions become forms of situated and embodied knowledge, enabling us to know through doing via devices that expand and reconfigure the action space, intertwining the external world and internal processes. Cognition, in this framework, is understood as extending beyond anatomical bounduaries of individuals, emerging from dynamic couplings between internal processes and the bodily, technological and social structures with which they interact. As theorised by Andy Clark and David Chalmers in their influential essay *The Extended Mind* (1998), human cognition arises from the continuous interplay of neural processes, bodily engagements, and technologically and socially organised environments (Clark and Chalmers 1998; Malafouris 2013). Tools are not external aids but integral components of the cognitive loop (Bruner and Lozano 2014; Bruner 2023). Humans are distinctive in that they store and accumulate crucial information for survival outside the individual mind, within a collective cultural reservoir of knowledge and experience built over thousands of generations.

From this point of view, the relationship with AI is even more powerful and could evolve into something entirely new. First, it is necessary to clarify why humans developed such a constitutive relationship with tools, now also embracing AI, and where unburdening sits within this framework. In order to answer this question, we must take a step back and examine the biological and cultural evolution of our species.

In Africa, profound climate changes forced our hominin ancestors to adapt to increasingly different environments, moving away from the original forests (deMenocal 1995). As forests gave way to ever larger savannahs, survival depended less on anatomical specialisation and more on behavioural versatility, which allowed them to exploit new, highly nutritious, energy-rich resources, such as carcasses abandoned by large carnivores. In the absence of natural equipment such as fangs and claws, this exploitation was made possible by the systematic production and use of tools of the Paleolithic industries (Semaw et al. 2003). In this context, more sophisticated cognitive abilities and the ability to cooperate became selectively advantageous. The interplay between environment, technology, behaviour and sociality triggered complex feedback and gene-culture coevolution cycles that profoundly transformed human ecology and biology, accelerating encephalization and cognitive, behavioral, cultural, and social complexity (Rightmire 2004; Stout et al. 2015; Bruner and Beaudet 2023).

Due to structural constraints of the pelvis preventing birth of fetuses with ever larger heads without impairing locomotion (Dunsworth et al. 2012), this process produced an apparently paradoxical outcome. Human neonates born immature with brains still incomplete and unstructured. They are utterly helpless, vulnerable to all dangers, and incapable of autonomy. This renders them completely defenseless and dependent on prolonged parental and social care far more than other primates. This condition, termed "secondary altriciality," demands an apparently disproportionate time and resource investment by the familial and social group for survival (Hrdy 2009; Tomasello 2019).

However, what seems to be a serious disadvantage is actually the fulcrum of our evolutionary success. Our brain continues to develop intensely after birth, presenting extraordinary neuronal plasticity, shaped by an environment rich in cultural, social and linguistic stimuli, everything that is fundamentally human. This prolonged developmental window enables the cognitive flexibility that distinguishes us and is realised through the co-evolution of biology, technology, sociality and culture. In a sense, our biology is configured to be completed by culture; human development can only unfold in the presence of a world largely constructed by us and our predecessors over hundreds of thousands of years through the transmission of technical skills, the accumulation of cultural knowledge, and the formation of strong social bonds. This process of 'niche construction' (Odling-Smee et al. 2003), has become so complex and pervasive that we could not survive outside this network of tools, institutions, and relationships today (Richerson and Boyd 2005).

Leroi-Gourhan's reflections on technology as an extension and externalisation of competencies, and on culture as a space for sharing competencies through language: 'Man's memory is exteriorised, and its container is the cultural collectivity' (Leroi-Gourhan 1993) now prove illuminating. Furthermore, the second crucial aspect in understanding the evolutionary continuity of AI emerges here: the tool not only extends bodily capacities, but also frees them from part of their functional load by assuming or externally redistributing tasks that would otherwise require unsustainable biological effort. For instance, a Plio-Pleistocene hominin that was unable to tear the hide of a large herbivore with its nails could achieve this with a flint flake, and could fracture massive bones with a stone hammer. Moreover, due to their evolving characteristics, tools significantly and indefinitely boost the transformative impact of human activities on the environment. This process of relieving the body of burdensome tasks, both physical (in prehistory) and cognitive (thanks to modern technologies), and the resulting empowerment is what Arnold Gehlen ([1940] 1988), the father of philosophical anthropology, defines as 'unburdening' (*Entlastung*).

Following a tradition already present in the work of Herder and tracing back to Pico della Mirandola, Gehlen interprets humans as "*Mängelwesen*" (deficient beings): relatively indeterminate organisms lacking fixed instincts and not specialized for any particular ecological niche

('the not-yet-determined animal' Nietzsche wrote in *Human, All Too Human*). This biological indeterminacy gives humans a unique openness to the world (*Weltoffenheit*), enabling them to adapt to diverse contexts by actively modifying their environment. Consequently, humans progressively construct a stable artificial world, the only truly habitable environment for their existence. Echoing Gehlen in *The Interpretation of Cultures*, Clifford Geertz claims that humans cannot be understood separately from the symbolic and technical systems they create. We are beings 'trapped in webs of significance we ourselves have spun', and these networks, linguistic, technical and ritual, are as constitutive as biological organs (Geertz 1973).

According to Gehlen ([1940] 1988), every unburdening frees up physical and cognitive resources that can be deployed elsewhere, triggering further technical and social transformations. Biological functions are transferred to external devices, creating new possibilities for action and organisational forms. The systematic use of fire is a paradigmatic example of this: it enabled defence against predators, expansion into cold environments and cooking of food, which radically improved diet. Cooking also facilitated digestion and nutrient assimilation, contributing to an increase in brain size and cognitive development (Wrangham 2009). Every unburdening relieves the physichal or mental load and opens up a range of possibilities that were previously unthinkable. It is not necessary to provide examples to demonstrate how true this is for AI.

Adopting this perspective enables us to view human history as an extended sequence of capacity extensions and technical unburdenings, from lithic tools and fire control to writing, calculation, agricultural techniques, industrial machinery and computer systems. These developments have progressively outsourced growing portions of sensory-motor and cognitive activity, creating new ecological niches and alternative ways of inhabiting the world (Odling-Smee et al. 2003). At each stage, the human species has delegated part of its capacities to external devices, thereby enabling the growth and reconfiguration of those remaining and eventually altering its own evolutionary profile.

However, there is another side to the coin concerning the possible "atrophy" of human faculties due to technology. Paul Alsberg, who coined the term *Mängelwesen* as early as 1922—almost twenty years before Gehlen—offers on this an original perspective (Parravicini 2026). In his book *Das Menschheitsrätsel*, Alsberg argues that humans do not develop technology because they are deficient beings; rather, they become deficient precisely because, from the very beginning, they have emancipated themselves from their bodies (*Körperausschaltung*) through technology. Dependence on technology is therefore the primary and constitutive trait, while biological deficiency and 'helplessness' are the consequences. Alsberg focuses on an aspect that is becoming very relevant for us today with regard to AI and its extensive use: every great technical innovation makes us enpowered in one area but inevitably involves the loss or atrophy of pre-existing biological capacities. This transforms relief into a new, deeper fragility (Alsberg 1922).

Yet it must be emphasised that, each time humanity has embraced a powerful tool, the same accusation has been heard: 'This will make us stupid/lazy/inhuman.' This happened with writing (Plato stated in the '*Phaedrus*' that writing will produce the loss of the ability to remember mentally), and with the printing press, calculator and internet. Today, it is happening with AI. However, history shows that delegating repetitive or burdensome tasks has enabled us to focus our efforts on more abstract, social, creative and ethical issues.

The limits of continuity: the problem of consciousness

The outlined path clearly shows how AI, in its current manifestations, is in full continuity with the progressive externalisation of functions (motor, sensory and cognitive) that characterised human evolution (Clark 2003). However, this continuity does not preclude novelty and significant shifts in perspective, opening up

radically new possibilities. Previous technologies have already done so, as evidenced by the domestication of fire, the agricultural revolution and the printing press (McLuhan 1964). Something similar, with potentially even deeper implications, is unfolding before our eyes with AI. Previous technologies extended bodily or cognitive capacities linearly, amplifying what we were already capable of doing. AI, however, introduces an enhancement that involves not just specific functions, but also the processes that generate them. It doesn't just perform tasks on our behalf; it dynamically simulates the cognitive mechanisms through which those tasks are conceived and executed (Bostrom 2014). Therefore, the unburdening it produces is not merely operational or cognitive, but also has strong emotional and 'existential' components. Contemporary AI is designed to establish a resonant relationship with the intimate and profound needs of human users, rather than a merely functional one as with user-friendly machines. It is designed to be a confidant, support, advisor and even friend (Turkle 2011).

This perspective naturally leads to the most widely discussed and problematic issue in AI: whether it possesses, or will ever develop, autonomous consciousness. Here, the evolutionary continuity between human technology and AI reaches its limit. The problem is complex because we lack a shared definition of consciousness, even for humans. The origin of consciousness still remains an enigma for neuroscience and the philosophy of mind (Chalmers 1996; Dehaene 2014).

Current AI systems have nothing comparable to autonomous consciousness. They only appear to have consciousness because they are modelled on aspects of human consciousness in order to interact with it (Bender et al. 2021). They can pass the Turing test. This is not because they are conscious. It is because they behave indistinguishably from humans. The Turing test is a performance test, not an assessment of interiority (Turing 1950). They imitate the external manifestations of human thought by statistically mapping the ways in which internal states are described in millions of training texts. In essence, they are 'statistical simulators' of human thought (Marcus and Davis 2019).

Since we said that no one knows for certain what consciousness is, I will briefly explain with an anectdote what I believe AI still lacks in order to approach what we call consciousness. Once, at the end of a conference, someone from the audience, echoing a famous passage by Kant, asked me what AI would feel upon seeing a starry sky. My answer was simple and perhaps a little bit disappointing: nothing. Let me explain what I mean.

For us humans, feeling wonder or awe before something that transcends us in its immensity comes naturally and automatically. Similarly, it is natural for us to ask existential questions about why things are the way they are, our place in the world, and the sense of life and death. Fromm observed that "Man is the only animal for whom his own existence is a problem which he has to solve" (Fromm 1947). Ours is not mere curiosity, nor is it just an emotional feeling (shared with many other animals), nor is it a metaphysical mystery, but this need has a precise evolutionary origin (Friston 2010).

Our ancestors lived in complex natural and social environments, where signals were often uncertain or contradictory. In such contexts, identifying causal connections, spotting patterns, and predicting consequences was essential. The human brain evolved to become a predictive system; rather than passively recording the world, it actively interprets it by interweaving clues, expectations and internal states to construct coherent scenarios that guide action, even when information is ambiguous (Clark 2013). From this evolutionary history derive "sense heuristics", which are cognitive shortcuts that attribute meaning, spot intentions, and recognise dangers or opportunities. These heuristics extract evolutionary relevance, filtering the environment and selecting what matters, immediately generating meaning. The mind weaves a narrative fabric around things, sometimes replacing reality with comforting narratives, somewhat as Nietzsche says of nihilism (Nietzsche [1887] 1996b). This

process of extracting meaning is so important that it generates the need to seek meaning even where there is no need to do so, such as when faced with the beauty of a starry sky.

AI lacks all of this. It lacks 'sense heuristics' because it has never been involved in biological survival events or environments that require interpretation, anticipation or decision-making for self-preservation. It has no embodied, situated body with which to explore the world, nor inner states, motivational systems or will. It has no own place in the world, nor any interest in interpreting what it processes. It is like a mirror of our consciousness, perfectly reflecting it but lacking its own depth. While it can describe a starry sky with extraordinary accuracy, it will never experience it, not because it is 'cold', but because it lacks a point of view and subjective experiences. Without an embodied perspective or needs requiring sense attribution, there is no basis for consciousness to emerge. What AI lacks for consciousness is a subjective self.

According to Thomas Nagel (1974), consciousness is what it is like to be something: a qualitative, subjective and situated experience, which he refers to as 'qualia'. While no one can directly access another's experience, every conscious being possesses this inner phenomenal dimension. AI, by contrast, lacks this dimension and simply performs computational functions.

From this viewpoint, AI can be likened to David Chalmers's 'philosophical zombies'. To demonstrate how our understanding of consciousness based solely on physical and behavioural data may be insufficient, Chalmers imagines an entity that is indistinguishable from a human in terms of its physicality and behaviour, but which lacks internal subjective experience (Chalmers 1996). Contemporary AI strikingly resembles this example: it replicates, simulates and imitates with remarkable precision, yet experiences nothing. In this sense, they are a new generation of philosophical zombies, capable of producing descriptions of the world but lacking inner life.

Interestingly, cinematographic art anticipated this theoretical knot with extraordinary insight, and Blade Runner is one of the most profound representations of it. Outwardly human but endowed with algorithms rather than real personal experience, replicants perfectly embody the philosophical zombie scenario. However, Ridley Scott's film, based on Philip K. Dick's novel (1968), unsettles this perspective. At the film's climax, after a fight in the rain, the android Roy Batty (Rutger Hauer) could let Rick Deckard (Harrison Ford) fall to his death, but instead chooses to save him. This decision is reflected in the famous final monologue: 'I've seen things you people wouldn't believe... All those moments will be lost in time, like tears in rain. Time to die.' In this speech, Roy claims a personal and unrepeatable experience, an embodied memory that reveals a conscious awareness of the value and finitude of his own life, limited to a programmed duration of four years. Through the power and uniqueness of his memories, Roy achives a form of consciousness not by reasoning, but because he feels deeply the imminent loss of that lived and un unique experience, and at that very moment feels empathy for the equally precious and irreplaceable life of Rick Deckard, despite being his antagonist.

Although from a literary and science fiction perspective, this vision introduces us to a future, or futurible, horizon where new forms of artificial consciousness may emerge alongside us and other species like apes and octopuses, consistent with recent cognitive science orientations (Low et al. 2012). Facing this disruptive event to the path described so far, at least three possible hypotheses or scenarios emerge, none guaranteed but all conceptually plausible.

The first can be termed the *hybrid* or *prosthetic inversion' model*. Since the Paleolithic, tools have acted as prosthetic extensions of human organs or functions. Recent advances in robotics, bionic medicine and brain-chip integration (Moravec 1988; Bostrom 2014) are pushing this relationship towards inversion. In the near future, our bodies and brains might become the prosthesis of a robotic superorganism that we will be intimately connected to. In this futurible scenario, our consciousness would support a collective, integrated superintelligence.

The second scenario can be called the *evolutionary-synthetic model*. Here no AI will develop autonomous consciousness but might experimentally create synthetic life forms undergoing evolutionary processes (Ray 1991). These life forms could evolve consciousnesses radically different from ours, i.e., allomorphic rather than anthropomorphic.

Finally, the third scenario involves *emergentist* phenomena, recalling the myth of Pygmalion. It cannot be totally excluded that beyond a certain threshold of complexity, sensory integration, and continuity of learning, global organized states with internal properties attributable to consciousness may emerge: anthropomorphic or, more likely, allomorphic (Tononi 2008).

Whatever the future holds, one thing is clear: AI is not just another technology. It poses an anthropological, political and ecological challenge. For the first time, we are facing an artefact that, through continuity or discontinuity, could place itself within our own ontological horizon. The question is not only what AI can do, but also what it and we might become through it. However, all this belongs to the future. The present demands that we dedicate ourselves to what truly matters: present day life. It is time to go.

Author's Note

For the drafting of this article, large language models (LLMs) were used to refine phrasing and ensure accurate English translation, given that the author is not a native English speaker. These tools were employed solely to polish the text and not to generate the original intellectual content. No AI was harmed in the making of this article.

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