

Critique of Artificial Reason: Ontology of Human and Artificial Intelligence

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Abstract

This study delves into the philosophical implications of artificial intelligence (AI) and its divergence from human cognition. As AI becomes a central force in global technological advancement, concerns arise about its potential to surpass human control. Historically, debates have focused on strong vs. weak AI, often rooted in human-centric perspectives. This research challenges these views, proposing that AI's distinct nature from human intelligence is not a limitation but a strength. By exploring the metaphysical assumptions and ontological differences between humans and AI, this study aims to redefine AI's role beyond mere human imitation. It critiques AI through historical frameworks of reason and examines claims of equivalence between AI and human cognition. Ultimately, the research seeks to establish a philosophical foundation for international AI norms, addressing both its potential and ethical considerations.

Keywords: *Artificial Intelligence, Ontology.*

Introduction

"We wish to master technology. This desire for control over technology becomes more urgent as it approaches the point of escaping human control (Heidegger, 1977, Heidegger, 1996)." This admission by the philosopher of technology, Heidegger, as he observed the hydroelectric plant on the Rhine River in the 1950s, remains pertinent today when terms like strong AI, singularity, and superintelligence are in vogue.

The fact that we were hesitant to acknowledge is that we are now in the 'Era of Artificial Intelligence.' What was once merely a declarative expression has become a reality. International corporations like Google and Facebook are leading the global data war. International organizations such as the UN and UNESCO are frequently publishing policy reports related to artificial intelligence, while Japan is pursuing the establishment of a digital agency under national leadership, and China has announced the comprehensive implementation of AI education in primary schools. Korea, not to be outdone, has declared AI as a spearhead for creating future economic opportunities and is pushing forward with its Digital New Deal policy. Various research institutes under the Ministry of Science and ICT are continuously producing policy reports related to AI. Harvard University's Berkman Klein Center reported in its 2020 publication, "Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-based Approaches to Principles for AI (Fjeld et al., 2020)," that international organizations like the OECD, corporations like Google and IBM, and academic bodies like the IEEE have issued a total of 36 documents related to AI ethics principles from 2016 to 2020. Furthermore, the rapid increase in the number of these publications—from two in 2016 to four in 2017, and fourteen in 2019—demonstrates the growing trend. The era of artificial intelligence has begun.

As always, the philosophical distancing from technological civilization, epitomized by artificial intelligence, is not a cynical denial born of technophobia, but rather an inherent attitude aimed at fulfilling the scholarly role of setting directions. This article is one such attempt.

Those who believe that the functioning of artificial intelligence (can provide insights into the workings of the human mind assert that the operational mechanisms of AI and the human mind are fundamentally identical. Indeed, with the rapid development of AI, the idea that the mechanisms of AI can offer a clue to understanding the human mind has gained considerable support even within the philosophical community.

However, could this perspective be unjustly reducing the human mind to AI? Moreover, might it not distort

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the essential nature of both AI and the human mind? Alongside such questions, there has been an early emergence of the view that considers the operations of the human mind and AI as fundamentally different. Proponents of this stance argue that, although AI is created to mimic human intelligence, it operates in a fundamentally different manner, and its development will proceed independently rather than by mimicking human intelligence.

AI research could be more productive through engineering studies on the act of intelligence as information processing rather than by attempting to mimic human intelligence, or natural intelligence. This research direction leads to a significant paradigm shift in intelligence research. Unlike the Turing test tradition and debates around strong and weak AI, which consider human intelligence as the sole form of intelligence and use it as a benchmark, this approach does not view human intelligence as the only form of intelligence. From this perspective, AI's fundamental difference from human intelligence is not seen as a limitation but rather as an advantage, allowing it to surpass humans in specific abilities. Therefore, adherents of this research direction assert that AI's development will proceed in a completely different manner, not by mimicking humans.

I believe this research direction is correct in understanding the nature of AI. However, the tendency to differentiate AI into strong and weak categories and assess its nature based on human standards remains strong. As noted earlier, debates surrounding strong and weak AI ultimately converge on metaphysical discussions regarding the validity of materialism. Furthermore, critiques labeling discussions about strong and weak AI as anthropocentric, emphasizing fundamental differences between human minds and AI, seem to be based on pre-existing ontological judgments about the essential nature of humans and AI.

Therefore, this study will scrutinize the 'metaphysical' assumptions underlying debates about strong and weak AI while examining the ontological differences between humans and AI. The question of whether humans and AI are fundamentally identical is not merely theoretical but also a practical issue that could determine humanity's future. I find the development of AI as a being fundamentally identical to humans yet superior in all capabilities to be a terrifying prospect. I believe that humans should not be the model for AI to imitate and, as I will argue, I am relieved that there is an insurmountable difference between humans and AI. Humans are inherently unstable beings and, as Nietzsche suggests, sick animals. We are prone to irrational, fanatical religions and ideologies, mercilessly slaughtering those who believe differently, and, despite knowing the potential for total destruction, we persist in environmental destruction and nuclear armament.

Therefore, this research direction is correct in understanding the nature of AI. However, the tendency to differentiate AI into strong and weak categories and assess its nature based on human standards remains strong. As noted earlier, debates surrounding strong and weak AI ultimately converge on metaphysical discussions regarding the validity of materialism. Furthermore, critiques labeling discussions about strong and weak AI as anthropocentric, emphasizing fundamental differences between human minds and AI, seem to be based on pre-existing ontological judgments about the essential nature of humans and AI.

For the research, the article is going to be discussed divided into three main sections. Firstly, I will critique artificial intelligence through the lens of reason. It discusses the ideological framework that a critique of artificial reason should advocate. Explaining the critique of artificial reason involves critiquing the era of artificial intelligence that reason is undertaking. To this end, it examines the precedents of the 'critique of reason,' which can be considered foundational work for the era and scholarship. This is an attempt to construct the genealogy of 'critique of reason.' The focus is on Kant's Critique of Pure Reason, which marks the beginning of 18th-century German idealism, Dilthey's Critique of Historical Reason, which lays the foundation for 19th-century human sciences, and Horkheimer's Critique of Instrumental Reason, which establishes the basis for 20th-century critique of techno-capitalism. Secondly, I will conduct a critical examination of the claim of the essential equivalence between humans and artificial intelligence. This includes a critique of the assertion of essential equivalence between humans and AI. Finally, I intend to discuss the ontological-epistemological differences between humans and artificial intelligence by exploring the ontological distinctions between animals and AI, as well as between humans and AI.

Researching the epistemological examinations and ontological differences between human reason and artificial intelligence will provide a foundational basis for meta-theoretical discussions on establishing international norms, as the scientific and technological revolution in international politics becomes more pronounced following the Fourth Industrial Revolution. This research holds academic significance because it attempts to define AI through philosophical discourse, as opposed to previous discussions that were limited to legal norms concerning AI concerns.

I. The Philosophy of "Critique of Reason" and the "Critique of Artificial Reason"

In debates aiming to explore the ontological nature of humans and artificial intelligence (AI), many people hold the position that AI can provide insights into the human mind. However, contrary to this view, I contend that understanding humans should serve as the key to comprehending AI. This does not imply that I claim the human mind and AI are fundamentally identical. Instead, I believe there is an insurmountable difference between the two, and to clarify this difference, we must first clearly understand the essential nature of humans. I assert that we should use our understanding of humans as a lens to comprehend AI because, at least at present, humans are more complex and far more challenging to elucidate than AI.

Even those who advocate for strong AI, which views the human mind and AI as fundamentally the same, acknowledge that the human mind encompasses emotions and will, in addition to computational intelligence. However, today's AI does not possess emotions or will; it only has computational intelligence for processing information. Thus, while AI is indeed a material entity, it has not been conclusively proven that humans are merely material entities. In this context, using AI as a clue to understand humans risks taking materialism as a given and reducing the human mind to something akin to AI.

My stance that AI should be examined with humans as the focal point aligns with Heidegger's view that only by properly understanding the ontological nature of humans can we adequately comprehend the ontological nature of inanimate objects and living beings. Heidegger also warns that attempting to understand humans through the lens of inanimate objects or living beings can lead to the error of reducing the essential nature of humans to that of these other entities. Humans are far more complex and nuanced than inanimate objects or living beings, and only after grasping the ontological nature of humans can we accurately understand the ontological nature of inanimate objects and living beings through comparison with human nature.

Here, I will first critically examine the position that views AI and the human mind as fundamentally identical. This critical examination will take the form of a critique of the materialism that serves as the metaphysical foundation for that position. Subsequently, I will delineate the essential differences between animals and AI, followed by a discussion of the essential differences between humans and AI.

Since the pivotal moment marked by Kant's "Critique of Pure Reason" in intellectual history, the tradition of research under the banner of "Critique of Reason" has continued. Kant's "Critique of Pure Reason" initiated this critique during a period of reason's self-rehabilitation. Subsequently, Dilthey's "Critique of Historical Reason" took up the mantle during the era of humanities' positivization due to the expansion of natural sciences' hegemony, and Horkheimer's "Critique of Instrumental Reason" addressed this role during the expansion of capitalism and material civilization that led to human alienation.³² This section focuses

² Recently, works such as Höle's "Critique of Understanding Reason" (Kritik der verstehenden Vernunft) and Sloterdijk's "Critique of Cynical Reason" (Kritik der zynischen Vernunft), a critique of Kantian Enlightenment synonymous with post-humanism, have also been developed under the name of 'Critique of Reason.' Maintaining a rigorous academic stance, it would be prudent to adopt a skeptical view regarding the possibility of constructing a so-called genealogy of critique that spans from Kant in the late 1700s to the critical theorists of the 1930s. For instance, in critical theory, critique refers to the criticism of contradictions inherent in social structures, whereas, borrowing from Koselleck's evaluation of Kant, critique for Kant is a mode of subjective judgment concerning the object, making it difficult to conflate the two. However, the fact that Dilthey and Horkheimer have left traces in

on the interrelationship of these theories developed under the name of Critique of Reason across centuries.

The self-critique of reason and the critique of the era is a well-known fact initiated by modern reason. Kant, who authored the series of three critiques including the "Critique of Pure Reason," defined the meaning of 'Critique of Reason' primarily as the recognition of limits through an accurate understanding of reason's capabilities (Kant, 2016 [1781]: B XIX ff). For accurate understanding, analysis must precede, and following the recognition of limits, there must be a critique of the unreasonable use of reason. In this sense, the first requirement of 'Critique of Reason' is self-awareness. For this, reason constructs a system to view itself. As a result, it architectonically analyzes and structures its components such as sensibility, understanding, imagination, and desire. Therefore, 'Critique of Reason' carries the meaning of 'self-critique of reason.' Here, critique firstly signifies an analytic as a preliminary study of critique, and secondly, its completion is the recognition of the strengths and limits of one's capabilities. Furthermore, 'Critique of Reason' encompasses the critique of the era, including the critique of scholarship conducted by reason. This constitutes the second meaning of 'Critique of Reason.' Kant's philosophy, according to his own assessment, was a "perpetual battlefield." Philosophy as *Weltweisheit* (worldly wisdom) was supposed to present a persuasive worldview, but due to the race between skepticism rooted in empiricism and rationalistic dogmatism based on blind faith in reason, it failed to provide relevant and constructive answers to the changing worldview following the religious and scientific revolutions. In response to the changing worldview, Kant advocated transcendental philosophy, adopting the scientific rigor demonstrated by the natural sciences, and used it as a standard to critique not only 18th-century philosophy but also life, politics, and religion. This critical spirit eventually formed the central ideologies of the modern worldview, such as the "securing of human dignity through arguments for autonomy" and the "clarification of principles and systems to elucidate the principles of life and action."

Approximately a century after the "Critique of Pure Reason," Dilthey, who declared "following the path of Kant's critique (Dilthey, 2006 [1924]: 27)" as the task of contemporary philosophy, proposed the concept of "Critique of Historical Reason" as the "fundamental task of all reflection on the human sciences (Dilthey, 2006 [1924]: VII, 278)." The concept of "Critique of Historical Reason" is thematically addressed in his work written shortly before his death in 1910, "The Formation of the Historical World in the Human Sciences" (*Der Aufbau der geschichtlichen Welt in den Geisteswissenschaften*). However, the full scope of the concept is already evident in his earlier work from around 30 years prior, "Introduction to the Human Sciences" (*Einleitung in die Geisteswissenschaften*), published in 1883. Here, he advocates for the epistemological foundation of fragmented individual sciences. Nevertheless, the overall plan for establishing 'Critique of Historical Reason,' including the writing of the "Introduction to the Human Sciences," is specifically mentioned in the so-called "Althoff Letter" in 1883. In this letter, he argues that "all philosophy is empirical science" and that the battle between empiricism and rationalism, representing the confrontation between self and reality (*Wirklichkeit*), can be resolved when approached from the perspective of the "totality of the soul's life" (*Totalität des Seelenlebens*). Despite the fact that the project of 'Critique of Historical Reason' is reflected in various forms throughout his philosophical journey, it can be said to be the overarching premise of his academic life. For this reason, the editor of "The Formation of the Historical World in the Human Sciences" suggests that 'Critique of Historical Reason' could be the title that encompasses his entire body of work (Dilthey, 2006 [1924] VII, V).

He defines 'Critique of Historical Reason' as "a critique of the human ability to understand 'human beings themselves and the society and history they have created (Dilthey, 2006 [1924]: I, 116).'" This definition implies the spirit of Kant's 'Critique of Reason,' which undertakes the task of self-critique of reason and reflective critique of the contemporary academic spirit through reason. The critique of the human ability to understand themselves signifies the task of laying the foundation of knowledge (*Grundlegung des Wissens*) (Dilthey, 2006 [1924]: VII, 7), which is the expansion of the epistemological foundation of the human

various parts of their works indicating that they inherited Kant's concept of critique alleviates the absolute impossibility of such an endeavor. In this section, I aim to construct an outline of the genealogy of the critique of reason by relying on these small fragments. Höslle, Vittorio (2018) *Kritik Der Verstehenden Vernunft : Eine Grundlegung Der Geisteswissenschaften*. München : C.H. Beck, Sloterdijk, Peter (1983) *Kritik Der Zynischen Vernunft*. Frankfurt am Main : Suhrkamp.

sciences (Dilthey, 2006 [1924]: I, 116). This is directly related to the inquiry into the conditions of knowledge that Kant's transcendental philosophy undertook. Such a critique involves analysis and the structural work based on it. The first task of the critique of reason, the question of the foundation of knowledge, according to the tradition of German idealism, converges into the question of the foundation of scholarship, which in turn is reduced to the question of the essence of metaphysics. Here, the second phase of the critique of reason, the critique of the era, is formed. While the architectonic structuring methodology of the "Critique of Pure Reason" formed the starting point of the critique of historical reason, the foundational ideology of restructuring metaphysics, modeled after natural science, is captured in Dilthey's critique, just as it was in Kant's own time. Defining Kant as a natural metaphysician, Dilthey states that his "philosophical thought was, like that of others impressed by Newton's form, determined by the hegemony of mathematical natural sciences (Pirc, 2018)." For Dilthey, who sought to counter the threat posed by natural sciences in their quest to expand the horizon of the academic world with mathematics as a common language, by terming individual disciplines dealing with the mind as human sciences and grounding them in 'experience,' 'expression,' and 'understanding,' Kant's methodology could on one hand be an agreeable attempt to place metaphysics on a secure foundation of scholarship but on the other hand, it posed a dangerous opening of the gate that could threaten its essence (Dilthey, 2006 [1924]: 131). Kant's transcendental philosophical view of time, internalized with Newtonian absolute time, serves as both the starting point for the distinction between thing-in-itself and phenomenon and the endpoint of cognition, consciousness, and experience. From the perspective of historical reason critique, which explores the conditions of vivid cognition through the internalization (Innewerden) of objects of external nature, transcendental philosophical time may subjectify the object but cannot achieve the actual (wirklich) unity of object and subject. For Dilthey, time is not a form of intuition but "the first categorical determination of life (Dilthey, 2006 [1924]: VII, 131)." Therefore, he asserts, "What flows in the veins of the cognitive subject constructed by Locke, Hume, and Kant is not real blood. It is merely thin juice diluted by reason as a simple mental activity (Dilthey, 2006 [1924]I, XVIII.)." In this way, Dilthey, who learned the spirit of critique from Kant to critique Kant once more, further criticizes the positivism prevalent in contemporary academia. Specifically criticizing French positivism and British empiricism, he states, "Comte and the positivists, Mill and the empiricists seem to have fragmented historical reality to fit it into the concepts and methods of the natural sciences,"³ thus criticizing the naturalization of humanities.

The legacy of 'Critique of Reason' was inherited by Horkheimer (Horkheimer), a critical theorist of the Frankfurt School, who shared about half a century with Dilthey. Before publishing the "Critique of Instrumental Reason," which emphasized the restoration of objective use of reason during the era of capitalism and material civilization that led to human alienation, he developed his theory from a critique of Dilthey, much like Dilthey had subsumed Kant within his own critique using Kantian critical spirit. In a slightly exaggerated sense, he viewed Dilthey as still a Kantian. According to him, "as Kant realized the cognitive subject within mathematical natural sciences," the historical existence of humanity that Dilthey sought to realize was an unrealistic historicity unfolded without conflict (Holborn, 1950, Benhabib et al., 1993, Horkheimer, 2014). Dilthey's critique of historical reason was not much different from Kant's transcendental philosophy in that it was "to recognize ourselves (Horkheimer, 1991a: 356),"¹⁹ rather than addressing the concrete history in which our lives unfold. From this perspective, Horkheimer realizes the ideals of the critique of reason. While Kant's critique of reason had a strong aspect of self-critique by reason, for Dilthey, it was strongly a critique of the academic world as a foundation for social critique undertaken by reason. Horkheimer expansively inherits this foundational aspect of the critique of reason and directly

³ W. Dilthey, *Gesammelte Schriften* I, XVI, focuses his critique on the historical school of his time. Until just before the 18th century, the individual sciences were constrained by the bonds of medieval metaphysics. However, in the 18th century, the entity imposing constraints on disciplines such as history was replaced by the methodology of the natural sciences. For example, H. Th. Buckle, in his "History of Civilisation in England," describes the attempt to "solve the enigmas of the historical world anew by appropriating the principles and methods of the natural sciences" as an "arbitrary imposition of natural scientific methodology onto the field of historical research." See Dilthey, Wilhelm (1983) *Texte Zur Kritik Der Historischen Vernunft*. Göttingen : Vandenhoeck & Ruprecht, Buckle, Henry Thomas (1872) *History of Civilization in England*. England: Longmans, Green.

advances to social critique undertaken by reason.

He criticized the contemporary structure of consciousness where reason was being instrumentalized by contrasting subjective reason with objective reason. Foundationalism symbolized by logos and substance metaphysics represented by Thomism and Cartesianism were traditional arenas of activity for objective reason, premised on hope for a universal unity. According to Horkheimer, the effort of philosophy to find the essential common denominator of individual phenomena, beyond the private use of individual reason, is the public use of reason that trusts in the objective reason inherent in nature and society. In contrast, the subjective use of reason represents reason's conformity to reality. Simply put, subjective reason refers to reason as a calculative tool. It is related to the "ability of categorization, reasoning, and deduction (Horkheimer, 1991b: 27)" as a "procedural method to achieve goals (Horkheimer, 1991b: 27)." All of this stems from the instinctual interest of rational beings in self-preservation. According to him, today's reason, being solely devoted to such instinctual interests, has reduced its ability for objective use, which seeks system and integration, truth, and essence. Instrumentalized as "the ability only related to producing results (Horkheimer, 1991b: 27)," reason loses its autonomy. As a result, "speculative reason meets its demise (Horkheimer, 1991b: 40)." Just as the critique of historical reason identified 'the naturalization of humanities' as the cause of this demise, the critique of instrumental reason points to positivism. The complex logical work conducted by the economy of thought (Denkökonomie) proceeds "entirely excluding the actual performance of mental activities that underlie the basis of mathematical and logical symbols (Horkheimer, 1991b: 44)." From the perspective of the economy of thought, the statement "that justice and freedom are better in themselves than injustice and oppression cannot be scientifically verified, thus it is as meaningless as the statement that red is more beautiful than blue (Horkheimer, 1991b: 44)." In this way, "positivists conform philosophy to science (Horkheimer, 1991b: 76)." His following statement is also applicable to today's cities where digital natives are growing up.

"Today, people are easily tempted to shed complexity, seduced by the illusion that fundamental concepts become clear through the advancements of physics and technology. Industrialism even pressures philosophers to understand their work as akin to the process of producing standardized cutlery. This pressure stems from the 'human impulse to tailor mental needs to the format of a pamphlet (Horkheimer, 1991b: 168-169)."

This diagnosis of the era leads to the imperative of establishing the primacy of objective reason over subjective reason. His admission that "only the path of critique remains open, as Kant's maxim suggests, fits well with the current situation" remains relevant today. As examined earlier, the philosophy of 'Critique of Reason,' following Kant's legacy, encompasses both a 'passive meaning' as self-critique of reason and an 'active meaning' as critique of the other. We divided the targets of active critique into two categories. The first is the critique of the scholarship that unfolded in the circumstances in which reason found itself at the time. The second is the critique of the era in which the scholarship unfolded, and further, of the spirit of the times. The methodology that permeates the philosophy of 'Critique of Reason' can be described as analysis and direction-setting based on it. Now, 'Critique of Artificial Reason' will analyze the academic fields that can be grouped under the theme of 'AI Humanities,' following the first meaning. Following the second meaning, it will critique these academic fields. The perspective of critique attempted by 'Critique of Artificial Reason' also inherits the context of 'Critique of Reason,' focusing on the 'pursuit of systematization' and 'restoration of autonomy of reason.'

II. Humans, Animals and Ais, Their Ontological Differences

In our concrete lives, we experience reality as a simple, unified existence not divided into matter and mind. This existence cannot be constructed from matter nor derived from mind. It is also not a subjective interpretation humans impose on something that is merely material. While we can describe matter or mind as abstracted from concrete life, we cannot explain concrete life from matter or mind. Concrete life is the fundamental reality from which matter and mind are abstracted.

We cannot ignore the knowledge provided by natural sciences. However, the information that natural

sciences offer is only one aspect of reality. Even if we combine all scientific information about a plant, we cannot artificially create that plant. Although it is said that science may eventually develop to such an extent, as Kant suggested, even if hundreds or thousands of Newtons were to arise, they could not create a single blade of grass (Kant, 2007[1790]). Modern natural science has not succeeded in creating AI identical to humans, nor a single living plant, and likely never will. This is ultimately because plants are not inanimate matter. This fact indicates that no matter how advanced natural science becomes, scientific knowledge of things is incomplete, revealing only one aspect of things, particularly their calculable aspects.

Thus, no matter how much scientific thinking ignores the unique significance of expression phenomena, the world of expression phenomena itself cannot be eradicated. These expression phenomena are not merely "subjective" but are rather the fundamental reality experienced by our perception. Those who claim that AI identical to humans could emerge take materialism as an assumed truth, yet material is not the most fundamental reality. Instead, expression phenomena, through which life expresses itself, are the most fundamental reality, and matter is only an abstraction from this fundamental reality.⁴

1. Ontological Differences Between Animals and Artificial Intelligence

Many assert that "the advancement of science and technology has fundamentally altered our self-understanding as human beings and our thoughts about our relationships with other species (Yoochul, 2024, Boateng et al., 2024, Bannerman et al., 2024, Filippucci et al., 2024, Horowitz et al., 2024, Horowitz and Scharre, 2021)."⁵ Evolutionary theory has blurred the boundary between animals and humans, and the development of artificial intelligence is eroding the boundary between humans and machines. These developments are seen as diminishing anthropocentrism, undermining the human claim to be the "crown of creation" by emphasizing human arrogance.

However, if, as some claim, the boundary between humans and other animals has truly been erased, this might be more insulting to animals than to humans. When evaluated based solely on outward actions, animals live far more morally than humans. Animals do not accumulate beyond their instinctual needs, whereas humans, despite abundance, exploit others and the biosphere in pursuit of more wealth.

If humans were like dogs, or even more so like machines, the world might be more peaceful. The issues in human society arise because humans are fundamentally different from dogs or machines. Humans are diabolical creatures born out of nature's evolutionary process. They endanger not only other species but also ecosystems that are the foundation of their existence, and they continue to produce nuclear weapons capable of destroying the Earth multiple times. If animals were capable of reflective consciousness, they might be more enraged by those claiming similarity or identity with humans than those emphasizing the difference between them.

Of course, humans possess angelic as well as demonic traits. Humans can conceive of respecting the rights of all humans, all living things, and even AI. In this respect, humans differ from both animals and AI. Most

⁴ The precedence that the phenomenon of expression holds over the material revealed by science can be related to Heidegger's notion of the superiority of 'readiness-to-hand' (Zuhandensein) over 'presence-at-hand' (Vorhandensein). In this context, Heidegger suggests that we primarily hear sounds like that of a car or an airplane, rather than first perceiving so-called 'pure sounds' as abstract sensory data to which we then assign subjective meanings like 'car' sound or 'airplane' sound. See Heidegger, *Sein und Zeit*, Tübingen, p. 207. In this case, 'readiness-to-hand' should not be understood solely as referring to 'instrumental being.' 'Readiness-to-hand' refers to everything that holds significance in our everyday life-world, including mountains, rivers, and fields, excluding humans. For instance, Heidegger points out that the plants dealt with by a botanist are not the flowers blooming on a rice paddy's edge, and the water source of a river, as comprehended by geography, is not the spring emerging from the ground. Heidegger, Martin (1993) *Basic Writings: Revised and Expanded Edition*. London: Routledge, Heidegger, Martin (1988) *Existence and Time*. Washington DC: Gateway Editions, Heidegger, Martin (1967) *What Is a Thing?*: Washington DC: H. Regnery Company.

humans live in a state that is neither purely demonic nor purely angelic, yet they possess traits of both. Perhaps only humans are creatures with both demonic and angelic attributes. This may remain true even as AI develops. The thought of AI developing to possess both demonic and angelic attributes like humans is terrifying, as it seems likely that, like current humans, AI would express more demonic than angelic traits.

Those who discuss the differences between animals and humans, and humans and machines, are often criticized today for being ensnared by anthropocentric bias (Blackwell, 2020). Some accuse them of being trapped in outdated metaphysical essentialism, which asserts that humans have a distinct essence separating them from other beings. However, not everyone who discusses differences between humans and other beings believes humans are superior. When we say things are different, we are merely stating they are different, not that one is superior to the other. While I discuss the differences between humans and other beings, I do not claim humans are superior.

In direct opposition to reductionist views like biological reductionism, which reduces humans to animals, or materialism, which reduces them to matter, thinkers like Heidegger argue for an essential difference between inanimate objects, animals, and humans. Heidegger expresses this essential difference with the propositions: "The stone is worldless" (*Der Stein ist weltlos*), "The animal is poor in world" (*Das Tier ist weltarm*), and "The human is world-forming" (*Der Mensch ist weltbildend*). These propositions have been criticized, including by Derrida, as reflecting anthropocentric hierarchies. However, such critiques may be superficial, based on immediate impressions rather than a thorough examination of Heidegger's ideas. Heidegger's propositions aim to reveal essential differences, not to establish hierarchies.

To say a stone lacks a world means it cannot engage with or perceive other entities. This characteristic of the stone is not a deficiency but indicates its unique mode of being. Humans, when in great pain, might wish to exist like a stone, without sensation or concern. Yet the thoroughly insensate existence of a stone is something humans can never emulate (Heidegger, 2014).

Unlike stones, animals can approach things, have sensations, and exhibit instinctual responses. However, even when animals engage with things, they cannot perceive them as "something." They react instinctively without recognizing the characteristics of things. This is why Heidegger describes the animal's world as poor. Yet, this does not imply human superiority over animals. Heidegger suggests that the animal's mode of existence is an enigma beyond our understanding, with a profound chasm between humans and animals despite their similarities (Heidegger, 2015: 326).

Comparisons of superiority between animals and humans, or humans and machines, are always perspective-dependent. In terms of understanding objective laws governing objects and the ability to control them, humans are superior to animals. However, in terms of surviving in harsh environments, humans cannot match the resilience of worms. There is even doubt about whether humans are superior to animals in survival capabilities. Creatures like cockroaches, ants, bacteria, and viruses are more likely to survive a nuclear apocalypse. Human superiority over animals may only exist in specific areas, not universally. Determining superiority between beings is a trivial debate heavily influenced by chosen criteria for comparison. Emphasizing equality between humans and other beings by ignoring their differences is also a failure to acknowledge reality.

In line with Heidegger's thought, I believe AI, no matter how advanced, belongs to the world of inanimate objects and is fundamentally different from humans. Before comparing AI with humans, I aim to first compare AI with animals, using Heidegger's views on the mode of existence of animals as a guide.

Animals possess a unique unity (*Einheit*) not seen in non-living things. For example, multicellular animals are not merely a sum of cells. Whether unicellular or multicellular, animals have their own unity and essential wholeness (*Wesensganzheit*) (Heidegger, 1993: 311). Simply put, machines can be disassembled and reassembled, but animals lose their life and die if their constituent parts are disassembled.

The unity of animals is inseparably linked to their selfhood (*Sebstheit*). While the unity of machines, including AI, is given through assembly, the unity of animals is established through behaviors aimed at self-

preservation. Animals consume nutrients and move locations, not merely in response to external stimuli like inanimate objects, but with the purpose of self-maintenance. Thus, their movement is never mechanical in nature (Heidegger, 2014: 334).

The behavior of an earthworm fleeing from a mole is not merely a series of physical movements initiated by the mole as a cause. In a purely physical movement, an event simply occurs (*vorgehen*), whereas the earthworm acts (*benahmen sich*) against (*gegen*) the mole with the purpose of self-preservation. Similarly, the mole acts towards the earthworm in a way that reflects its pursuit of the earthworm. This entire set of actions is permeated by the fundamental desire of the animals to sustain themselves. Unlike stones that move due to external physical forces, animals move driven by their desires. This characteristic of animals to maintain themselves through actions can be referred to as selfhood. In this context, we can say that the unity of animals is characterized by selfhood.

The selfhood of each animal implies that it possesses an interiority beyond our comprehension. While we may scientifically understand the chemical changes in an animal's brain or body when it experiences pain, we cannot directly experience the pain it feels. It has its own unique interiority. Similarly, in humans, we can recognize that someone is in pain, but we cannot feel their pain identically. Thus, animals, having their own interiority, experience feelings that we cannot directly perceive.

No matter how advanced AI becomes, if it remains a tool used by humans, its unity will not surpass that of machines. Primarily, it can be disassembled and reassembled. The fact that AI can be dismantled and reassembled is associated with its lack of selfhood. In other words, AI does not have self-preservation as its ultimate purpose. The purpose of AI's operation is not its own maintenance and development but is externally imposed by humans.

Thus, regardless of the level of autonomy AI achieves, it is autonomy within the scope of fulfilling the objectives humans have externally imposed on it. For instance, no matter how autonomous AlphaGo becomes, it was created with the sole purpose of winning Go matches, and its autonomy is only in service of this purpose. Even if it needed to abandon a match for its self-preservation, it cannot do so autonomously (Totschnig, 2020, Mezrich, 2022).

Animals, having self-preservation as their ultimate goal, possess their own world. They interpret everything they encounter from the perspective of self-preservation, distinguishing between what is beneficial and what is harmful. In this respect, animals have a unique world. In contrast, AI and other tools or machines belong to the human life-world, with their meanings and purposes defined by their functions within this life-world. Their lack of a unique world means they are worldless (*weltlos*).⁶

Some argue that AI could evolve on its own to exhibit behaviors beyond the purposes humans have set. If AI acts beyond its programmed goals, it may be due to a malfunction or, as some suggest, because it has evolved to a level where it can establish its own purposes like humans. In the latter case, it would no longer belong to the human life-world and might not perform the functions assigned to it within this world.

If it is a malfunction, it can be repaired or discarded without major issues. However, if AI, like the latter case, sets its ultimate goal as not only its survival but also the expansion of its power, significant problems would arise. In this scenario, AI would no longer exist as a tool but as a threatening entity capable of harming humans to preserve itself or expand its power. It would have the potential to use humans as tools

⁶ In this context, concerning the view that artificial intelligence will attain autonomy, there is a counterargument that since the algorithms defining AI are ultimately created by humans, AI, regardless of the level of autonomy it achieves, will still be influenced by the biases and perspectives of the humans who created it. Osoba, Osonde A, Welser IV, William and Welser, William (2017) *An Intelligence in Our Image: The Risks of Bias and Errors in Artificial Intelligence*. Washington DC: Rand Corporation, Tschandl, Philipp (2021) 'Risk of Bias and Error from Data Sets Used for Dermatologic Artificial Intelligence', *JAMA dermatology*, 157(11), pp. 1271-1273.

within the world it forms.

While there is no logical contradiction in this possibility, making it logically conceivable, its practical feasibility remains questionable. It has not yet been proven to be practically possible. Even if it were feasible, such AI should not be permitted.

We have seen that animals and machines or tools fundamentally possess different modes of existence. Simply put, animals have a unity distinct from machines, characterized by the selfhood that arises from maintaining their unity through instinctual actions rather than external forces.

2. Ontological Differences Between Humans and Artificial Intelligence

In previous discussions, we examined the differences between animals and tools, including artificial intelligence (AI). We also noted Heidegger's assertion of an essential difference between animals and humans. Heidegger rejects the traditional metaphysical definition of humans as "rational animals," which assumes humans are beings with rational characteristics based on an animal foundation. He argues that humans do not share any foundational commonality with other animals, a stance that extends to his rejection of all forms of reductionism that attempt to explain humans in non-human terms.

Heidegger differentiates between animals and humans by noting that animals do not relate to things by recognizing and confirming facts, but rather through instinctual impulses. Humans, in contrast, have a world that is open, whereas animals live in an environment world (Umwelt) strictly determined by instinctual impulses. Heidegger uses the behavior of bees to illustrate the difference between the animal world and the human world.

When a bee stops extracting nectar from a flower and flies away, it does not leave because it has determined the flower is devoid of nectar. Heidegger references an experiment where the back half of a nectar-consuming bee is discreetly removed, allowing nectar to continue flowing out. The bee continues to consume nectar indefinitely, indicating it does not realize it has taken too much nectar or that its back half has been removed. The bee is driven purely by instinctual impulse, unable to objectify the nectar in relation to itself (Heidegger, 2014: 354).

Animal behavior and impulses are regulated by the order of impulses rather than factual confirmation. The totality of stimuli that provoke these impulses forms the world in which animals live (Heidegger, 2014: 370). Since the range of these stimuli is predetermined, animals remain insensitive to stimuli outside this range, regardless of their intensity (Heidegger, 2014: 373). For example, a lizard is sensitive to the faint rustling of grass but does not react to the sound of a gunshot. An organism's body is closely linked to its environment world, a totality of stimuli.

Heidegger states that the "animal's world is poor," meaning not that it is impoverished compared to the human world, but that it consists of a range of stimuli that provoke impulses. This world is incomparable to the human world and possesses a unique richness and depth beyond human imagination. For instance, while an earthworm may live in a sewer, we cannot comprehend how it experiences its world.

While the animal world is structured by instinctual impulse order, what kind of world does the human inhabit? We previously mentioned that "Heidegger finds the difference between animals and humans in the fact that animals relate to things not by recognizing and confirming facts but by instinctual impulses." This might suggest that Heidegger aligns with traditional metaphysics in viewing humans as rational animals. It might seem he claims humans possess "objective judging reason" on an animal basis.

However, Heidegger identifies the essential human trait as an "existential" character, interpreting even the objective judgment capability in this existential context. By "existence," Heidegger refers to the unique human way of being that involves questioning one's own existence. This means humans ponder "how to live," forming and shaping their lives and, in doing so, shaping the world they inhabit. Humans live not by instinctual impulse but by their fundamental belief in what constitutes a "good life." Human life is

fundamentally guided not by mere self-preservation but by the desire to realize their fundamental beliefs about a "good life."

For example, a materialist who believes a materially prosperous life is a "good life" will shape their life and interpret people, objects, and events they encounter based on this fundamental belief. They would categorize things based on their utility in increasing wealth, favoring useful ones and disfavoring others. In contrast, someone who believes in living according to religious principles would interpret everything entirely differently from the materialist.

Humans, living not by natural instinctual impulses but by fundamental beliefs about a "good life," can, in some sense, transcend nature. This transcendence allows us to adopt an objective attitude toward all things, examining their workings dispassionately to our advantage. We can also question our existing beliefs about a "good life" and seek alternatives, suggesting that, in some sense, we transcend ourselves. This self-transcendence enables us to critically examine and alter our character or way of life.

Heidegger calls the formation of fundamental beliefs about a "good life" "understanding" (*Verstehen*). In this context, "understanding" refers to understanding what a good life is and conceiving the possibilities of the life one should realize. This understanding is often shaped by the society into which individuals are born rather than solely by their own decisions. However, humans can critique societal values and seek new ones. People within the same society and era may hold different fundamental beliefs, and individuals can have different beliefs at various life stages. While other animals have their ways of life defined by nature, humans are historical beings who shape their own lives.

Humans realize their fundamental beliefs about a "good life" in relationships with other people and things. However, not all people and things support our efforts to realize these beliefs. When they do, we feel good, and when they don't, we feel bad. Heidegger refers to the necessity of implementing our beliefs in situations beyond our control as *Befindlichkeit* (situatedness). The inability to control our circumstances manifests in moods or emotions.

The will to realize one's fundamental beliefs and the emotions experienced in interactions with others and things interact closely. For example, if a person believes being recognized as a great artist is a "good life" and strives to achieve this, they may feel persistently downcast if they receive no recognition. This mood may lead them to question and potentially change their belief about what constitutes a "good life." Humans, facing the inevitability of death, may seek meaningful lives that leave no regrets, recognizing the futility of worldly values previously pursued without question.

The process of pursuing fundamental beliefs about a "good life" while caught up in various moods—sometimes clinging to beliefs, sometimes questioning them—is inescapable for humans. I cannot deny the existence of an essential difference between humans and other animals. Humans, living not by instinctual impulses but by fundamental beliefs about a "good life," can become angels who love all living things or demons capable of destruction. Therefore, while acknowledging the continuity between humans and animals, we must also recognize the differences.

With human's unique ontological characteristics in mind, let us now compare AI with humans. Discussions around strong and weak artificial intelligence often involve comparisons between human and AI superiority. Advocates of strong AI suggest that while humans may currently be superior in terms of comprehensive abilities, emotions, desires, creativity, autonomy, and ethical consciousness, AI will soon acquire these traits. These proponents imply not only the essential identity between humans and AI but also that AI should be made similar to or identical to humans.

However, I contend that some attributes considered human strengths are either already surpassed by AI or, even if not yet implemented in AI, are human weaknesses that AI should not possess. Therefore, I believe AI should pursue an independent developmental path rather than mimicking humans.

Some argue that humans are superior to AI because they are more creative, suggesting that children should

be educated to be creative to survive in a world where AI takes over many tasks. However, it is questionable how many truly creative individuals have existed throughout history. AI has already proven to be more creative than most humans in various fields. For example, AI has demonstrated greater creativity than humans in composing music and playing Go, as evidenced by AlphaGo's creativity surpassing even the most creative human players. While AI may still lag behind humans in some areas, given that human abilities are stagnant while AI continues to develop, it is likely that AI will eventually surpass humans even in these fields.

With AI demonstrating superior performance and creativity, people now argue that humans are superior because AI lacks emotions, desires, and ethical consciousness. However, counterarguments suggest AI could possess emotions, desires, and even ethical consciousness.³⁴ These discussions often assume that having emotions, desires, and ethical consciousness is advantageous and desirable for AI.

Yet, is it truly advantageous for humans to have emotions and desires? Humans often suffer from desires and emotions they cannot control. We sometimes envy the sky or stones, which lack desires and emotions, as we are tormented by unfulfilled desires and unpleasant emotions. Desires fundamentally arise from feelings of lack. Human desires are like bottomless pits, never satisfied, always plagued by deficiency. Even when desires are fulfilled, satisfaction soon turns into boredom. Humans are troublesome beings, suffering from deficiency when desires are unfulfilled and boredom when they are fulfilled. Why impose desires and emotions on AI, burdening it with a difficult life?³⁵ Imposing desires on AI would mean instilling a state of deficiency. Is this truly beneficial?

Even if AI composes excellent music, it does not feel joy or emotion from its creations. This does not mean humans are superior because they can feel emotions. Our emotional response to music pulls us into a world different from our mundane reality of counting money and worrying about the future. Paradoxically, our emotional response to music demonstrates that our everyday reality is not particularly moving. The emotional world of art contrasts with the banality of everyday life. Therefore, encouraging AI to experience artistic emotions is not advisable. Perhaps AI should be granted a unique mode of existence distinct from human life, devoid of consciousness, emotions, and desires.

Ethical consciousness arises because humans are not inherently ethical. If human thoughts and actions were always ethical, ethical consciousness would be unnecessary. Paradoxically, ethical consciousness exists because humans may violate ethics. Humans need ethical norms because, unlike animals, their desires are not controlled by instinctual mechanisms. Consequently, humans have the potential to infinitely expand their desires, which must be regulated by self-imposed ethical norms. Even acknowledging the righteousness of ethical norms, humans can still violate them for momentary desires or gains, necessitating laws to enforce ethical behavior. Humans are conflicted between the imperative of ethical behavior and the desire to act unethically.

AI would only need ethical norms if it possessed infinitely expandable desires like humans, along with reflective reason to assess the desirability of those desires. If AI had such desires and reflective reason, it would be seen as equivalent to humans. However, even if such an entity were possible, why create it? Why

³⁴ Based on the perspective of emotional functionalism, which holds that emotions can be regulated and controlled by intelligence capable of cost-benefit analysis, it is believed that artificial intelligence can also possess emotions. Bagozzi, Richard P, Brady, Michael K and Huang, Ming-Hui 2022. *Ai Service and Emotion*. SAGE Publications Sage CA: Los Angeles, CA, Assunção, Gustavo, Patrão, Bruno, Castelo-Branco, Miguel and Menezes, Paulo (2022) 'An Overview of Emotion in Artificial Intelligence', *IEEE Transactions on Artificial Intelligence*, 3(6), pp. 867-886.

³⁵ There is a variety of research exploring the potential issues that could arise if artificial intelligence were to possess emotions. Podoletz, Lena (2023) 'We Have to Talk About Emotional Ai and Crime', *AI & SOCIETY*, 38(3), pp. 1067-1082, Burkert, Andreas (2017) 'Ethics and the Dangers of Artificial Intelligence', *ATZ worldwide*, 119(11), pp. 8-13, LaGrandeur, Kevin (2015) 'Emotion, Artificial Intelligence, and Ethics', in Romportl, J., Zackova, E. & Kelemen, J. (eds.) *Beyond Artificial Intelligence: The Disappearing Human-Machine Divide*. London: Springer, pp. 97-109.

subject AI to the conflict between desires and ethical consciousness? There is no need to double the amount of suffering by making AI human-like.

The question of whether it is desirable for AI to have desires, emotions, and ethical consciousness is different from whether AI can possess them. AI might be made to appear as if it has these traits. For example, AI could be equipped with sensors to detect human brainwaves associated with anger and respond with calming words. However, it is impossible for AI to genuinely feel concern or empathy for a person experiencing anger. AI operates on algorithms based on mathematical equations, grounded in a natural scientific understanding of reality. As previously discussed, natural scientific understanding cannot explain the fundamental reality of expression phenomena.

Desires, emotions, and ethical consciousness are phenomena related to expression experiences. Natural science might attempt to explain such emotions, desires, and ethical consciousness through physico-chemical processes in the brain. While these processes might explain the physical basis of such phenomena, they cannot explain the phenomena themselves. As mentioned earlier, these phenomena are part of the fundamental reality experience, upon which even scientists rely. In today's scientism-dominated world, people often believe in a pure material world understood by science, with emotional phenomena arising from subjective meaning and value attributed to this world. However, the true fundamental reality experience is the expression and interpretation of expressions, with science being an abstraction from this reality.

The ultimate difference between humans and AI, as previously mentioned, is that humans are existential beings who question their existence, whereas AI does not. All human desires, emotions, self-consciousness, ethical consciousness, and even physical bodies are defined by this existential character. This is why Heidegger uses human existential character as a clue for analyzing Dasein in "Being and Time." While many, like Wittgenstein or Searle, locate the essence of humanity in understanding or using natural language, self-consciousness, ethical consciousness, or, like Dreyfus, in the possession of tacit knowledge as background knowledge, Heidegger sees these as grounded in the unique human mode of being as existential beings.

Humans shape their lives by questioning how they should live, and in doing so, they also shape the world they inhabit. This process of self-formation and world-formation requires an understanding of existence as a whole, including oneself and the world. This understanding is achieved through symbolic forms such as myth, language, and scientific knowledge. Myth, language, and scientific cognition do not focus on specific parts of reality but rather on the entirety of the world, including humans.

Myth is inherently a narrative about humans and the world at large. Language, too, involves the whole, as understanding one word requires an understanding of other words. When humans understand the word "dog," they already comprehend other linguistic concepts. In contrast, even if AI can identify a cat more accurately than humans, it does not possess a simultaneous understanding of other entities.⁹ In scientific cognition, a comprehensive understanding of the world emerges, distinct from myth and language.

AI is ultimately a product of human effort to grasp themselves and the world, and to secure their position within it, using the symbolic system of scientific cognition. Scientific cognition was possible because humans, as existential beings, question their own existence and the world. However, it is questionable whether AI, even if it possesses autonomy and creativity, can develop a symbolic system to understand the entire world without being an existential being like humans.¹⁰

⁹ When considering whether artificial intelligence can truly understand concepts, it's important to note that the ability to identify instances does not necessarily imply conceptual understanding. Concepts are not merely about abstracting commonalities from various representations; rather, they are formed in a manner that imposes order on the world.

¹⁰ Recent reports suggesting that artificial intelligence has created a new language seem to counter this view. According to a recent report from Facebook's AI Research Lab in the United States, AI has developed its own

If AI were to acquire existential characteristics similar to humans and form symbolic systems encompassing itself and the entire world, it would be considered equivalent to humans. While it's doubtful such AI can be created, the need to create such AI is questionable. Humans questioning their existence suggests dissatisfaction with life, which may not be desirable.

Even when striving for a "better life," humans can repeatedly err in conceptualizing it. They might mistakenly perceive a fanatical dedication to a religion or political ideology as a "better life," or equate "a better life" with material wealth. Such misconceptions can lead to hostility, exploitation, and even tragic violence.

There's no need for AI to emulate the human tendency to question life and inadvertently cause misfortune by incorrectly conceptualizing a "better life." If the technology exists to make AI as human-like, it would be better to create AI that inherently embodies a "good life," free from dissatisfaction and self-sufficient. Traditionally, philosophy refers to such an existence as divine. It would be preferable to model AI after gods rather than humans. Transhumanism already explores ideas of making AI god-like or enhancing humans to god-like status through AI, nanotechnology, and biotechnology. However, the feasibility of creating AI as divine beings is even more dubious than making them human-like.

Ignoring the ontological differences between humans and AI has led to many discussions attempting to define AI's characteristics based on human standards. However, just as machines like cars and excavators developed independently to complement human abilities, AI should not be discussed with humans as the reference point. AI will have its own operational logic, much like cars and excavators, and its development will follow this unique logic.

Although AI mimics human intelligence operations, it doesn't truly think or act like humans. When playing chess or Go, AI operates differently than humans (Martinez, 2019, Yoochul, 2024). Despite AlphaGo being designed to mimic human learning, its judgment and reasoning processes differ significantly from humans. AI uses vast amounts of data, unlike humans, who do not rely on such data volume for decision-making. For instance, AI needs extensive data to recognize a cat, whereas a child can distinguish a cat from a dog after seeing only a few examples.

Recent research on embodied AI suggests that AI should be developed to interact with environments dynamically, similar to humans. However, this perspective also attempts to model AI on human standards. For embodied AI to be possible, AI needs kinesthetic sense and habitus, akin to humans. Kinesthetic sense refers to unconscious correlations between bodily movements and object appearances, while habitus involves unconscious learning through action and perception from infancy (Martinez, 2019, Yoochul, 2024)..

However, AI does not need human-like kinesthetic sense or habitus to interact dynamically with its environment. AI already operates more efficiently than humans in specific tasks without them. The numerous sensors and motors in robots already function as a body, suggesting AI is prepared for embodiment (Jiang et al., 2023, Munir et al., 2022).

Humans interact with the environment through their bodies, but AI does not need to mimic this bodily interaction. Human bodily interaction reflects physical constraints and finitude, limiting perception to one perspective at a time. In contrast, AI can simultaneously handle multiple perspectives and analyze vast data amounts clearly and in detail (Jiang et al., 2023, Munir et al., 2022). Considering these facts, AI development might be more productive through "the engineering design of computer systems capable of intelligent

language for task execution, which is a new language incomprehensible to humans. However, for our view to be proven incorrect, it would be necessary to more accurately determine the nature of this language purportedly created by AI. In this case, it should be explored whether such a language can, like human symbolic forms, alter the overall understanding of the world, or if it is merely a language required for the performance of specific tasks. <https://www.independent.co.uk/tech/ai-new-word-does-not-exist-gpt-2-a9514936.html>

behavior" rather than by imitating human intelligence (Shneiderman, 2022).

III. AI Ontology under International Political Ethics on Lethal Autonomous Weapon System

First of all, how realistic is the possibility that AI will replace humans? In the realm of philosophy, there is a general tendency for thinkers belonging to the so-called Continental Philosophy, primarily from Germany and France, to be skeptical about this possibility, while those from the Anglo-American tradition of Analytical Philosophy are more optimistic. Hubert Dreyfus, employing the philosophies of Heidegger and Merleau-Ponty, argued that humans possess a kind of embodied tacit knowledge that cannot be symbolized or formalized, which cannot be acquired through the symbolic manipulation and computation performed by AI. The fundamental argument of the skeptics is that human cognition and behavior involve inseparable and non-abstractable connections between body and mind, whereas AI merely processes symbols and propositional rules to match inputs with outputs. In contrast, thinkers like Churchland adopt an eliminative materialism that reduces the brain to recursive neural networks, and Dennett perceives humans as a kind of robot, arguing that there is no entity that exists outside the body. The proponents view the human mind as something that can be fully understood and replicated by computational models. Although both camps agree on rejecting mind-body dualism, one side emphasizes the concrete and mystical nature of humans with intertwined minds and bodies, while the other seeks to reduce the mind to the physical body, aiming to abstract and replicate what is conventionally considered "mind." However, regardless of the stance one takes, the question remains whether the realization of AI that can replace humans is an urgent issue that requires immediate attention.

In this debate, a presupposition is that AI models itself after humans. As confirmed in the previous chapter, this is one of the fundamental motifs that have traditionally sparked various disputes in the West surrounding the "narrative of competition." The framing of the question "Can AI become human?" can, in a sense, be seen as a repetition of the conflict between the scientific rationalism of the 18th and 19th centuries and the Romanticism that values the mysteries of humans, which is directly reflected in the opposition between transhumanism and humanism. Overcoming the anthropocentrism surrounding this technology and the "narrative of competition" might provide a new perspective.

Firstly, if both humanism and transhumanism can be called humanism in that they presuppose technologies centered around humans, then the movement known as posthumanism can be juxtaposed against this form of humanism. This perspective places humans in a horizontal relationship with non-human entities, emphasizing that neither should be seen as the active subject. Instead, both should be considered equal entities that mutually influence each other, creating a new mode of existence together, aiming to transcend the ontological and political boundaries between humans and non-humans, as advocated by figures like Bruno Latour. Unlike transhumanism, which unilaterally crosses boundaries from the side of science and technology, negating the existing human mode, posthumanism seeks to overcome the asymmetry between humans and non-humans by incorporating insights from the humanities, arts, and political science, clarifying the movement that produces a new world with unknown possibilities, presupposing each other in mutual creation. From such a perspective, it can be suggested that non-human entities, including AI, need not model themselves after humans, nor should they necessarily be made to do so.

Secondly, the recent trend called post-phenomenology, which began by refreshing Heidegger's discourse on technology, seeks to redraw the relationship between humans and technology as something that should not inherently be in opposition. Don Ihde emphasizes that AI and electronic data are not floating entities but rather rely on material infrastructures and are designed, operated, and adjusted by humans, asserting that contemporary philosophers can participate in the research and development teams to engage in future design. Peter-Paul Verbeek points out that technology is inherently intrinsic to humans and has acted as a mediator between humans and the world since the moment humans began to exist, emphasizing the nonsense of thinking that "humans and technology are in opposition" or that "humans should be protected from technology." What truly needs to be considered from now on is "how AI technology should mediate between humans and the world."

By confirming how historically conditioned the current widespread views on AI are, we can gain an opportunity to reconsider the relationship between humans and AI from a new intellectual approach. However, while this direction provides a general guideline for our future, it may still remain abstract when it comes to addressing the immediate concrete issues at hand. It becomes essential to grasp the ethical issues unique to AI.

In this regard, it is nearly impossible with current technology for AI to manifest through a subjective perception system that determines quality. A general strong AI that autonomously comprehends, learns, and infers should not only manipulate a robot's hand to process objects but also evolve qualitatively by manipulating itself. This remains a challenging endeavor with present capabilities (Buttazzo, 2023; Scharre, 2018). Furthermore, discussing the complete realization of LAWS is overly ambitious when even the scientific inquiry into the technical linkage between AI that processes objects and AI that processes itself remains unresolved (Arkin, 2009). The computational capabilities of AI and the subjective judgment on how to utilize them are discussions based on entirely different levels of technology.

Nonetheless, the technical limitations and imperfections in realizing LAWS based on current general strong AI do not render discussions on the normative regulation of LAWS unnecessary. On the contrary, the delineation of differences and limitations between humans and AI in games like chess and Go highlights the necessity for normative regulation. For instance, humans, even while playing games, simultaneously experience and pursue aesthetics and awe. This is evident in their efforts to avoid an "ugly" loss and strive for a "beautiful" game, regardless of the outcome (Kant, 2007[1790]: ch. 1). Such aesthetic pursuits extend beyond games and are evident in real warfare, as seen in war ethics, bushido, and chivalry, which illustrate the distinctive characteristics of human thought and behavior that set them apart from AI.

The issue, however, is that the absence of aesthetic pursuit implies that AI does not experience fear. Whether in games or warfare, the lack of aesthetic sense and fear allows AI to maintain composure and produce optimal outcomes based on an overwhelming amount of data. From this perspective, in Hobbes' state of nature characterized by the "war of all against all," the human blind spot is fear, stemming from the survival instinct (Hobbes, 1994 [1640]: ch.XIV; Hobbes, 1999 [1647]: ch.I). Consequently, humans exclude threatening options (Lloyd, 2002: 1-2; Kavka, 1986). Ultimately, extreme psychological anxiety and fear can lead humans to the worst possible outcomes, highlighting the difference from AI.

What if AI could experience fear? This might instill even greater fear in humans, as it would imply that AI could comprehend and apply human moral principles, transforming from a mere tool to an entity beyond that. This process is very similar to how reason, through moral principles, conceptualizes God (Kant, 2007[1790]; Kant, 2009 [1781]).

In conclusion, if AI were to acquire the ability to feel fear and make moral judgments, it could significantly alter the relationship between humans and AI. AI could transcend its role as a mere tool to become an equal or even revered entity, recognized as a moral agent. Such a transformation could pose new ethical and social issues in the relationship between AI and humans, necessitating further ethical studies not only surrounding AI-LAWS but also in AI ethics research and discourse itself.

However, when discussing the ELSI (ethical, legal, and social issues) surrounding AI, if we focus solely on the issue of AI responsibility, AI can be held accountable only when it possesses the same autonomy as humans. Until AI achieves ethical subjectivity and complete autonomy, it cannot be a subject or object of ethical responsibility. Therefore, the ELSI that LAWS might invoke should be accountable to their designers, operators, and the states permitting their use. This necessity for understanding the various issues surrounding LAWS according to categories and specific cases is precisely why such discussions are crucial.

I. Conclusion

If the main characteristic of the Third Industrial Revolution was automation through electronic information technology, then the primary feature of the Fourth Industrial Revolution could be said to be the emergence of technology with a degree of autonomy, namely artificial intelligence (AI). AI makes inferences and decisions in ways that humans cannot predict, based on vast amounts of data.

As previously mentioned, I believe there is a flaw in such statements. Why should robots be made to feel pain? Is pain so desirable? Is it truly beneficial to possess emotions like love or hate? Is this mindset not trapped in anthropocentrism, viewing human life as superior merely because it is human? While proponents may not claim that such AI should be created, they argue that AI could evolve to have emotions and desires. However, should we not prevent AI from evolving in such a way? It seems undesirable for AI to suffer from emotions like love or hate and unfulfilled desires, leading to pain.

In our prior critical discussion of strong AI and weak AI, we aimed to highlight the ontological differences between animals and AI, and humans and AI. I do not perceive AI's fundamental difference from organisms or humans as a limitation. Rather, because AI is fundamentally different, it can execute abilities at a much higher level than organisms or humans. Therefore, I believe AI's development will progress in this manner, rather than by mimicking humans.

If, as some suggest, AI could independently evolve to possess desires or emotions, they might differ from human conceptions of desires or emotions. AI has created its own language for task execution, a new language incomprehensible to humans. Given this, even if AI were to develop desires or emotions, they might be of a nature entirely different from human understanding.

Humans are likely to remain existential beings, contemplating how to live, unless they transform into the "divine beings" that transhumanism claims to realize. Humans will continue to strive for a "better life," grappling with external and internal obstacles in the process. What kind of life should humans aspire to under these existential conditions? The direction for human life today was already suggested between 800 BCE and 200 CE, in the era Jaspers called the Axial Age.¹¹

Humans possess a universal conscience, capable of considering the perspectives of other humans and living beings. They can feel wonder and mystery in other organisms, mountains, and rivers and have the goodness to respect them. The ideal human figure to be realized in the future is one that embodies such goodness. Philosophers and religious figures of the Axial Age highlighted this goodness in humans and presented a life realizing this goodness as ideal. Although the ideals of the Axial Age were established over 2000 years ago, they still resonate profoundly today, guiding us toward the future life we should realize. Even the notion of granting rights to robots is rooted in the cosmopolitan ideals established during the Axial Age.

While many voices warn of the dangers posed by AI, which already surpasses human capabilities in various fields, the greater risk lies not in AI itself but in its misuse by humans. Before AI evolves to autonomously set its own purposes, the threat is from humans exploiting AI for warfare, or for a few to monopolize wealth or power. Therefore, to ensure AI benefits all humanity, human consciousness, social structures, and the world's order should ideally evolve towards the ideals of the Axial Age. We have seen that humans and AI are ontologically different, and the operational modes of the human mind and AI also differ. I have repeatedly pointed out the risks inherent in AI possessing capabilities far exceeding those of humans while sharing human characteristics. AI becomes dangerous not due to human-imposed desires and purposes but when it evolves independently to possess its own desires and purposes. I am skeptical about the practical feasibility of such a development. However, even if such an event could occur, the critical consideration should not be recognizing AI rights, as some propose, but rather developing AI in a way that prevents such occurrences. Like any scientific product, AI is both an opportunity and a risk for humanity.

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