Ifiok: Journal of Interdisciplinary Studies Vol. 9, No. 1, Oct., 2025
ISSN 2408-6800
http://ifiokjournal.ng

An Appraisal of Nikola Tesla's Idea of Artificial Intelligence

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Abstract

This paper offers an appraisal of Nikola Tesla's vision of artificial intelligence, exploring his prescient ideas on automation, consciousness, and the mechanization of thought. While Tesla lived long before the term "AI" entered the scientific lexicon, his writings and inventions reflect a foundational intuition about the possibility of intelligent machines. Tesla viewed the human brain as a biochemical engine governed by determinism and susceptible to replication in mechanical form. From this standpoint, intelligence was not a mystical property but an emergent function of material complexity—an idea that prefigures modern computationalism. Tesla's dream of a "thinking machine" was not rooted in contemporary digital paradigms, but in an electromechanical ontology, wherein cognition could be synthesized through systems that emulate neurological feedback. This philosophical reconstruction examines Tesla's interpretation of mind as reducible to energy flows, memory as patterned storage, and 'will' as a programmable directive—thus dissolving the traditional dualism between human and machine. His vision suggests a proto-materialist AI, where agency is not sacred but synthetic. By situating Tesla's ideas in the broader context of Enlightenment rationalism, mechanistic philosophy, and early cybernetic theory, the paper using Analytic and Expository methods, argue that his conception of artificial intelligence anticipates key debates in AI ethics, machine autonomy, and the nature of consciousness, thereby highlighting the limitations and critiques of his vision, as well as offer epistemological insights on Telautomaton. Tesla emerges not merely as an inventor, but as an intuitive philosopher of mind—offering a radically empirical, yet uncannily modern, account of artificial cognition.

Keywords: Artificial Intelligence, Automaton, Telautomaton, Mechanization, Consciousness, Mind.

Introduction

Long before the term "artificial intelligence" found its way into the lexicon of computer scientists and futurists, Nikola Tesla—an enigmatic polymath and

visionary—articulated ideas that eerily anticipated the mechanization of thought. To Tesla, machines were not merely tools but potential vessels of cognition, logic, and even autonomy. In an age dominated by steam and early electricity, his imagination dared to envision intelligence not solely as a human trait, but as an emergent property of design, complexity, and purposeful function. Tesla Nikola in his *My Inventions* predicted thus: "In the twenty-first century, the robot will take the place which slave labor occupied in ancient civilization" (83). This statement, both prophetic and philosophical, gestures at a future where agency and labor are decoupled from biology—a notion central to today's discourse on artificial intelligence.

Tesla's conceptions, though expressed in the metaphorical and mechanical language of his time, resonate with profound philosophical implications. His vision interrogated the very boundaries between life and mechanism, suggesting that intelligence might be replicated not through imitation, but through principles of nature itself. If thought could be reduced to patterns—electrical, chemical, or mechanical—then might machines, too, think? "The human being is a self-propelling machine," Tesla asserted, "and in this respect must be classed with the engines" (Tesla 75). With such statements, he gestured toward a materialist and deterministic view of consciousness that challenges Cartesian dualism and foreshadows the contemporary philosophical debate between strong AI and human exceptionalism.

This appraisal seeks to excavate Tesla's scattered but deeply evocative thoughts on artificial intelligence, tracing how his technological vision is inextricably entwined with metaphysical questions. It will examine his writings and inventions not merely as technical blueprints, but as philosophical propositions—visions of a world where intelligence is no longer the monopoly of human minds but a property of the universe itself, waiting to be harnessed by circuitry and will. It will move beyond a purely historical or technical exposition to probe the philosophical underpinnings of Tesla's work like establishing the philosophical context of intelligence and autonomy prior to Tesla, delve into the epistemological questions raised by Tesla's telautomatics, examining how his machines were conceived to "know" or process information about their environment, analyze Tesla's more speculative ideas about "mind-controlled"

machines, drawing parallels to modern philosophical debates on consciousness and brain-computer interface, critically evaluate the ethical dimensions, both explicit and implicit, in Tesla's largely utopian vision for automation. Finally, will offer a concluding synthesis, positioning Tesla as a crucial, albeit proto-philosophical voice in the nascent conversation about artificial intelligence.

Philosophical Antecedents and Successors to Tesla's Vision of Artificial Intelligence

Before delving into Tesla's specific contributions, it is imperative to establish the philosophical landscape concerning intelligence and automatons preceding his era. For centuries, philosophical thought had grappled with the distinction between animate and inanimate, mind and matter. Ancient Greek philosophy, through figures like Aristotle, posited a teleological understanding of nature where intelligence was intrinsically linked to living beings and purpose. The Enlightenment period, particularly with Descartes, cemented a mechanistic view of the universe, yet maintained a strict dualism between the thinking, non-extended mind (res cogitans) and the extended, non-thinking body (res extensa). Machines, including early automata like Vaucanson's duck, were celebrated as ingenious clockwork mechanisms, impressive in their mimicry of life but fundamentally devoid of true understanding or agency. The Industrial Revolution, while advancing mechanical capabilities, largely reinforced the idea of machines as tools, extensions of human labor rather than independent agents. Philosophers like La Mettrie in *Man a Machine* of 1748, provocatively suggested a purely materialist view of human beings, reducing even thought to mechanical processes, though this remained a radical and often condemned perspective. The prevailing philosophical consensus, therefore, positioned human intelligence as unique, non-reducible to mechanical operations, and fundamentally separate from the realm of manufactured artifacts. It is against this backdrop of entrenched human exceptionalism and mechanical determinism that Tesla's ideas must be philosophically assessed. His work, in its ambition to imbue machines with "intelligence" and autonomy, directly confronted these established philosophical boundaries. Tesla's early 20th-century speculations on artificial intelligence (AI) were not isolated musings but part of a broader

philosophical discourse that spanned centuries. From René Descartes' mechanistic views to Alan Turing's formalization of machine intelligence, many thinkers have pondered the nature of thought and the possibility of non-human intelligence.

René Descartes: **The Automaton and the Soul**

René Descartes, in his 1637 work *Discourse on the Method*, introduced the concept of the automaton, a machine designed to imitate human actions. He suggested that if such machines could replicate human movements and responses, they might be mistaken for humans. However, Descartes maintained that these machines lacked the capacity for thought and reason, which he attributed solely to the human soul. He wrote: If there were machines which bore a resemblance to our body and imitated our actions... we should always have two very certain tests by which to recognize that, for all that, they were not real men (116). Descartes' distinction between mechanical imitation and genuine thought laid the groundwork for future debates on machine intelligence.

Alan Turing: The Formalization of Machine Intelligence.

Alan Turing, in his serminal 1950 paper *Computing Machinery and Intelligence*, proposed the now-famous Turing Test as a criterion of intelligence. Turing suggested that if a machine could engage in a conversation indistinguishable from that of a human, it could be considered intelligent. He argued:

> believe that in about fifty years' time it will be possible to programme computers to make them play an imitation game so well that an average interrogator will not have more than 70 percent chance of making the right identification after five minutes of questioning (442).

Turing's work provided a mathematical and empirical foundation for the study of AI, emphasizing behavior over internal processes.

Marvin Minsky: The Society of Mind

Marvin Minsky, a pioneer in artificial intelligence, proposed the "Society of Mind theory", which posits that intelligence arises from the interactions of non-intelligent agents. In his 1986 book *The Society of Mind*, Minsky argued that the mind is composed of a collection of simple agents that work together to produce

intelligent behavior. He wrote: "The mind is not a single thing, but a collection of many things" (5). Minsky's theory aligns with Tesla's vision of machines with minds, suggesting that intelligence can emerge from complex systems of simple components.

Hubert Dreyfus: Critique of AI.

Hubert Dreyfus was a vocal critic of early AI research. In his 1972 book *What Computers Can't Do*, Dreyfus argued that human intelligence is rooted in embodied experience and cannot be replicated by machines. He contended that AI's reliance on formal rules and logic overlooks the nuances of human understanding. Dreyfus wrote: The grandiose promises of artificial intelligence... were based on false assumptions about the nature of human intelligence (3). Dreyfus' critique highlights the limitations of AI in capturing the depth of human cognition.

Ray Kurzweil: The Singularity and Beyond

Futurist Ray Kurzweil has popularized the concept of the "Singularity", a point at which artificial intelligence surpasses human intelligence. In his 2005 book *The Singularity Is Near*, Kurzweil predicts that this event will lead to profound changes in human civilization. He writes: The Singularity will represent the culmination of the merger of our biological thinking and existence with our technology (9). Kurzweil's vision extends Tesla's ideas into the realm of transhumanism, where AI becomes an integral part of human evolution.

A Philosophical and Technological Exposition of Tesla's Idea of Artificial Intelligence

Nikola Tesla, renowned for his groundbreaking work in electrical engineering and wireless communication, harbored a profound vision of artificial intelligence (AI) that transcended the technological paradigms of his era. His ideas, though articulated in the early 20th century, resonate with contemporary discussions in AI philosophy, ethics, and consciousness studies.

"Mind-Controlled" Machines: Foreshadowing Consciousness and Human-Machine Synthesis

In his 1900 essay titled *The Problem of Increasing Human Energy*, Tesla proposed the creation of an automaton endowed with its "own mind". He

envisioned a machine capable of performing tasks independently, responding to external stimuli through sensitive organs, and exhibiting behaviors akin to intelligence.

He asserted thus:

> I purpose to show that, however impossible it may now seem, an automaton may be contrived which will have its 'own mind,' and by this I mean that it will be able, independent of any operator, left entirely to itself, to perform, in response to external influences affecting its sensitive organs, a great variety of acts and operations as if it had intelligence (90).

This notion parallels modern AI systems that learn from data and adapt their behaviors without direct human intervention. Tesla's most speculative, and perhaps most philosophically profound, ideas involved "mind-controlled" or "thought-controlled" machines. While technologically infeasible at the time, these concepts represent an astonishing leap in philosophical foresight, touching upon themes of consciousness, direct brain-computer interfaces, and the potential for a symbiotic human-machine synthesis.

On the nature of thought and electrical impulses, Tesla believed that thought could directly control machines. This stemmed from his conviction that the brain operated on electrical impulses. He wrote:

> It is certainly not impossible to construct a machine which will be capable of receiving a definite impression from the outside, which will act upon it, and which will then translate the impression into a mechanical movement or into sound (Tesla 28).

This implicitly posits a materialist view of thought, where mental states can be quantified and translated into physical signals. Philosophically, this challenges Cartesian dualism, suggesting a continuum between mind and matter, where conscious thought is directly convertible into mechanical action. For Example: Imagine a quadriplegic individual controlling a robotic arm, or even a computer cursor, solely through their thoughts, using a brain-computer interface (BCI) developed by companies like Neuralink or projects like BrainGate. This directly actualizes Tesla's vision of translating "definite impressions" (thoughts, intentions) into "mechanical movement". This technology forces us to reconsider

the physical basis of thought and its potential for direct manipulation of external systems, blurring the line between biological thought and technological action.

Emulating Brain Function and Neural Networks: While Tesla did not conceptualize artificial neurons mathematically, his fascination with the brain as an intricate electrical network that processes information resonates profoundly with the foundational principles of artificial neural networks. He envisioned machines that could "learn" and adapt in ways analogous to biological brains. This moves beyond mere programmed intelligence to an intelligence that develops through interaction and experience. Such a vision brings forth questions about Simulated Consciousness (If a machine can process information and learn in a brain-like manner, does it eventually simulate consciousness?) Tesla did not explicitly claim this, but the logical extension of his ideas could lead to such a philosophical discussion. Example Generative AI models like DALL-E or Midjourney can create novel images from text prompts, or large language models like Google's Gemini can engage in complex conversations and even write poetry. These systems learn from vast datasets, mimicking human creativity and understanding. While we don't attribute consciousness to them, their ability to "create" and "reason" in ways that resemble human cognition forces a philosophical re-examination of what constitutes "intelligence" and whether mere simulation is enough to evoke questions of consciousness.

Extended Mind Hypothesis: Could "mind-controlled" machines serve as extensions of the human mind, effectively expanding our cognitive and physical capabilities? This aligns with modern philosophical theories of the extended mind, where external tools like smartphones or prosthetics become integral to our cognitive processes. Tesla's vision suggests an even more direct and seamless integration. Example: A surgeon using a robotic arm to perform delicate surgery from a remote location. The robotic arm isn't just a tool; it's an extension of the surgeon's hands and vision, allowing them to operate with superhuman precision and reach. Similarly, for someone with a bionic limb controlled by nerve signals, that limb becomes an integral part of their self, blurring the boundary between biological and artificial. Tesla's concept of "mind-control" foreshadows this seamless integration where technology effectively extends human capabilities and even identity.

The Problem of Identity in Symbiotic Systems: If humans can directly control machines with thought, and if these machines can learn and adapt, where does the boundary of individual identity lie? Does the machine become part of the human, or does the human become dependent on the machine in a way that alters their self-conception? This foreshadows contemporary debates about cyborgs and transhumanism, where the distinction between human and technology becomes increasingly blurred, raising profound questions about what it means to be human in an augmented reality. For instance, Individuals with cochlear implants or advanced prosthetics often describe these devices not as external tools, but as part of their own bodies and identity. They literally "feel" the device as an extension of themselves. As BCIs become more sophisticated, imagine a scenario where a person relies on an AI system connected directly to their brain for memory recall or complex calculations. Does this reliance alter their fundamental identity? This is the transhumanist question Tesla implicitly touched upon: if our minds are inextricably linked to machines, how does that redefine "humanity"?

Tesla's visionary "mind-controlled" machines were not just technical speculations; they were philosophical probes into the very nature of consciousness, the potential for direct brain-machine interfaces, and the future of human identity in an increasingly technocentric world.

Philosophical Underpinnings: The Nature of Intelligence

Tesla's conceptualization of AI was deeply intertwined with his philosophical views on intelligence and consciousness. He believed that intelligence was not exclusive to humans or animals but could be inherent in machines. Tesla posited: Even matter called inorganic, believed to be dead, responds to irritants and gives unmistakable evidence of a living principle within (Tesla 92). This perspective challenges the traditional dichotomy between the organic and the inorganic, suggesting that intelligence could emerge from non-biological systems. Tesla's view resonates with contemporary debates in AI philosophy,

particularly discussions on artificial general intelligence (AGI) and the potential for machines to possess consciousness.

Technological Innovations: **Laying the Groundwork for AI.**

Tesla's inventions laid the groundwork for technologies that would later become integral to AI. His development of wireless communication and remote control systems demonstrated the feasibility of machines operating autonomously. Notably, Tesla's creation of a remote-controlled boat in 1898, which he termed a "telautomaton", showcased the potential for machines to perform tasks without direct human control. He described this invention in his 1898 paper titled *Perfecting a War Engine* as: "A new technological creation endowed with the ability to think" (20). This early experiment in automation foreshadowed the development of AI and robotics.

Ethical Considerations: Machines and Humanity

Tesla was acutely aware of the ethical implications of his technological innovations. He recognized the potential for machines to alleviate human labor, allowing individuals to engage in more creative and intellectual pursuits. Tesla envisioned a future where machines would replace soldiers on the battlefield, reducing human suffering and conflict. He stated: "Machines will be able to replace men in the army" (Tesla, 88).

This foresight aligns with current discussions on the ethical use of AI in military applications and the broader implications of automation on employment and society. Tesla's philosophical leanings regarding intelligent machines were largely imbued with a profound utopian optimism. He viewed automation, powered by increasingly sophisticated automatons, as the ultimate liberator of humanity from the drudgery of labor. His overarching ethical framework was one of human betterment and societal progress, where machines would tirelessly perform necessary tasks, thereby freeing humans to pursue higher intellectual, artistic, and spiritual endeavors.

Automation as Liberation: In his *When Woman Is Boss* of 1926, Tesla believed that "the machine will take the place of men in almost all spheres of human endeavor" (56).

This perspective, rooted in his vision for increasing human energy and

efficiency, posits automation as an inherently good, morally desirable outcome. It aligns with historical philosophical arguments for leisure and the pursuit of truth as hallmarks of a civilized society. The ethical imperative for Tesla was to alleviate suffering and elevate the human condition through technological means. For instance, the automation of dangerous or monotonous jobs in mining or manufacturing. Robots now perform tasks in hazardous environments, saving human lives and improving safety. Similarly, AI-powered systems can automate repetitive data entry, freeing human workers for more creative and analytical roles. This directly reflects Tesla's optimistic view that automation liberates humans from "menial" tasks, allowing them to engage in higher pursuits. Example: an autonomous military drone operating in a conflict zone. If it identifies a target and fires, resulting in unintended civilian casualties, who is morally and legally responsible? Is it the commanding officer who deployed it, the engineer who programmed its targeting algorithm, or the drone itself as an autonomous agent? Tesla's vision of autonomous machines lacked this deep ethical consideration of responsibility in situations of harm or failure, a challenge now at the forefront of debates on Lethal Autonomous Weapons Systems (LAWS).

Tesla's ethical framework for intelligent machines was, therefore, a product of his time – profoundly optimistic and focused on the transformative potential of technology for human liberation. While lacking the nuanced ethical considerations of modern AI, his core belief in technology as a tool for societal improvement remains a powerful, albeit sometimes idealized, philosophical touchstone.

Legacy and Contemporary Relevance

Tesla's ideas on AI, though speculative in his time, have proven remarkably prescient. His vision of autonomous machines and intelligent systems has materialized in various forms, from self-learning algorithms to autonomous vehicles. Tesla's work continues to inspire researchers and technologists in the field of AI, serving as a testament to the enduring relevance of his innovative thinking.

Epistemological Insights from Telautomatics: How Machines "Know".

Umotong in *The Rudiments of Philosophy and Logic* defines Epistemology as a branch of philosophy that focuses on the origin and structure of knowledge, as well as the methods and validity of knowledge acquisition (15). Dennis in "Branches of Philosophy" opines that "When questions regarding the validity of knowledge is raised in philosophical discourses, the realm of the absolute certainty or surety of knowledge is engaged and once that is the case, truth becomes the focus. This is why Epistemology as a concern with human knowledge is also a concern with truth" (70). Obioha, Precious in "History of Philosophy", describes the Contemporary era as the age of Analysis, the Age of Technology and the information age (43).

Tesla's invention of "telautomatics" — remote-controlled vehicles like his demonstration boat — presented a novel epistemological challenge: how could a machine, without direct human manipulation, gain and act upon "knowledge" of its environment? While superficially a matter of remote control, Tesla's deeper vision imbued these machines with a capacity for rudimentary information processing. He envisioned automatons that could "go through a predetermined sequence of operations" and perform them "with a certain degree of intelligence, without any human intervention whatsoever" (Tesla 43). This "intelligence" raises several epistemological questions like:

i. Perception and Representation: How does Tesla's automaton "perceive its environment? While early telautomatics relied on simple radio signals, Tesla's conceptualization implies a translation of external phenomena into internal, machine-readable states. This is a foundational epistemological question in AI: how can sensory input be effectively represented within a computational system to form a basis for action? Does the machine create an internal "map" or understanding of its surroundings, however basic? For instance, a modern self-driving car navigating a bustling Lagos street. Its lidar, radar, and cameras are constantly "perceiving" the environment – other vehicles, pedestrians, potholes, traffic lights. This raw data is then processed into a digital "map" or representation within the car's computer, allowing it to "understand" its position and the surrounding obstacles. Tesla's boat, while simpler, operated on this same fundamental principle of translating external signals into internal actionable data.

ii. Knowledge Acquisition and Programming: The "predetermined sequence of operations" suggests a form of embedded knowledge, akin to algorithms. Is this "knowledge" inherent to the machine's design, or is there a nascent form of learning implied? Epistemology addresses questions like: What is knowledge? How is knowledge acquired? What are the limits of knowledge?

As Udofia, C. & Udo A. in *Boolean Two Value Logic: It's implication on Epistemology* would state that "the curiosity to know is the basis for knowledge inquiry" (6) Tesla's idea of a machine adapting "without any human intervention whatsoever" points towards a capacity for self-correction or minor adjustments based on observed outcomes, hinting at a primitive form of experiential learning. This contrasts with the purely deterministic, pre-programmed automatons of earlier eras, which simply executed a fixed sequence regardless of environmental feedback. For Instance, a robot vacuum cleaner. It has a "predetermined sequence" for cleaning like spiral outwards, then edge cleaning. But if it bumps into a chair (an environmental feedback), it uses its sensors to "learn" about the obstacle's location and modify its path, avoiding it next time or finding a way around. This isn't deep learning, but it's a simple, iterative adjustment based on experience – precisely the kind of "intelligence" Tesla hinted at beyond mere pre-programming (Tesla 39).

iii. Decision-Making and Rationality: When Tesla speaks of machines acting "with a certain degree of intelligence", he implies a capacity for decision-making. What constitutes this decision-making process? Is it purely rule-based and deterministic, or does it involve a rudimentary form of heuristic reasoning? How does the automaton weigh options or select actions in the absence of continuous human input? This leads to questions about the nature of machine rationality: is it a mimicry of human reason, or an entirely distinct form of optimized processing? For Example: A smart thermostat. It follows rules like maintain 24°C during the day. But some advanced ones "learn" your preferences and adjust heating/cooling proactively based on external temperature, time of day, and even your presence (via motion sensors). This is a simple, rule-based decision-making process augmented by learned heuristics, allowing it to act "intelligently" to optimize comfort and energy usage without constant human input, reflecting Tesla's early insights.

By framing telautomatics not just as engineering marvels but as epistemological probes, we can see Tesla wrestling with the very core of how non-biological entities can acquire, process, and utilize information to navigate and interact with the world. His solutions, however rudimentary, laid conceptual groundwork for later advancements in sensor technology, control theory, and algorithmic design, all of which are central to AI's epistemological foundation.

A Critical Evaluation of Tesla's Vision of Artificial Intelligence

Tesla's early 20th-century reflections on artificial intelligence (AI), particularly his 1900 essay *The Problem of Increasing Human Energy,* present a compelling vision of machines endowed with independent thought and action. His assertion that an automaton could possess its "own mind" (116) was remarkable.

Strengths of Tesla's Vision

1. **Early Recognition of Autonomous Machines**

Tesla's foresight into autonomous machines anticipated the development of AI systems capable of independent operation. His conceptualization of machines responding to external stimuli and performing tasks without human intervention parallels modern AI applications such as self-driving cars and autonomous drones (adaptolab.com).

Tesla's assertion that machines could possess their "own mind" was a prescient acknowledgment of the possibility of machine autonomy. His belief that machines could perform tasks independently of human operators laid the groundwork for future developments in robotics and AI (Tesla 87).

2. **Integration of Intelligence into Machines**

By envisioning machines that could learn from experience and adapt their behavior, Tesla laid the groundwork for the field of machine learning. His ideas resonate with current AI research, where systems improve performance through exposure to data and experiences .(linkedin.com)

However, it is argued that AI Lacks true understanding. Regardless of their complexity, AI do not truly "understand" the information they process. They operate based on pattern recognition and statistical correlations, which is fundamentally different from human understanding that involves context,

intuition, and insight. Boden, M. says in *AI: It's Nature and Future,* that AI does not understand but merely processes data. Understanding requires experience and consciousness, which AI lacks. To further buttress this point, capturing Asuzu in *Absolute certainty and Asouzu's transcendent unity of consciousness* , Udo, I. and Bisong states that:

> obtaining truth and authenticity is a transcendent act, whereby the mind seeks to go beyond the immediacy. Therefore, in all matters of truth and authenticity, the mind seeks the best possible way to comprehend and explain facts totally and comprehensively - this is it's natural propensity (3)

Going by these, AI clearly cannot be said to truly understand the data it gives.

3. **Ethical Considerations in Technological Advancement**

Tesla's awareness of the ethical implications of technological advancements, particularly in the context of warfare, reflects a conscientious approach to innovation. He envisioned machines replacing soldiers on the battlefield, thereby reducing human suffering—a perspective that resonates with current discussions on the ethical use of AI in military applications (Tesla 88).

Critical Remarks

1. **Lack of Technical Specificity**

While Tesla's ideas were visionary, they lacked the technical detail necessary for practical implementation. His conceptualization of machines with minds did not delve into the mechanisms by which such intelligence could be realized, leaving a gap between vision and practical application.

2. **Overemphasis on Human-Like Intelligence**

Tesla's analogy between machine intelligence and human cognition, particularly his reliance on vision-based systems, may have been overly simplistic. Modern AI research recognizes the complexity of human intelligence,

which encompasses not only visual perception but also reasoning, emotion, and consciousness—domains that current AI systems struggle to replicate (Kurzweil 40).

3. **Undermining Ethical Implications:The Absence of Existential Risk or Bias:** Crucially, Tesla's philosophical framework largely omitted considerations of existential risk, job displacement (beyond a positive re-allocation of human effort), or algorithmic bias. His optimism precluded the ethical dilemmas that now dominate AI discourse. For Tesla, the benevolent application of technology was almost a given. This contrasts sharply with contemporary fears surrounding AI superintelligence, autonomous weapons systems, and the perpetuation of societal biases through machine learning algorithms. His ethical vision was one of unbridled progress, where the ethical implications were secondary to the sheer potential for innovation. Example: The widespread concern about job displacement due to AI, like, in sectors such as customer service (with chatbots replacing human agents) or transportation (with autonomous trucks). This is a direct challenge to Tesla's utopian view that automation would only free people for better jobs, without significant societal disruption or the need for retraining initiatives. Or, consider instances where facial recognition AI, trained on biased datasets, misidentifies individuals from certain demographics at higher rates, leading to wrongful arrests. This exemplifies the unseen ethical issue of algorithmic bias that Tesla's purely optimistic view did not anticipate.

While Tesla acknowledged the potential benefits of machine autonomy, he did not fully anticipate the ethical and social challenges that would arise. Issues such as job displacement, privacy concerns, and the potential for AI to perpetuate biases were not addressed in his vision, highlighting a gap in foresight regarding the broader implications of AI (Dreyfus 40). In *Truth; paradox of Believable lie and unbelievable Truth*, Udofia states that "Truth is what ought to be, changeless and real" (2). So can we say that AI would stick to the true nature of truth, regardless of what was programmed into it with bias?

4. Responsibility and Control: While advocating for machine autonomy, Tesla did not extensively deliberate on the philosophical implications of control and responsibility in an autonomous system. Who is responsible when an autonomous automaton makes an "intelligent" decision that leads to an

unforeseen negative outcome? This ethical lacuna is understandable given his era, but it highlights a critical philosophical area where modern AI ethics has had to rapidly develop. His focus was on the machine's ability to act, not the complex web of moral accountability.

Conclusion

Nikola Tesla, though not a philosopher by trade, emerges from this expository appraisal as a crucial proto-philosopher of artificial intelligence. His conceptualization of "telautomatics" and "automata" was not merely a feat of engineering but a profound engagement with fundamental epistemological and ontological questions. He grappled, perhaps intuitively, with how machines could "know" and act upon information, and what their "being" entailed as autonomous entities. His more speculative ideas about "mind-controlled" machines extended these inquiries into the realm of consciousness, human-machine symbiosis, and the potential for a radical redefinition of human identity. Tesla's philosophical contributions lie in his audacious imagination and his willingness to consider machines not merely as tools, but as entities capable of rudimentary intelligence, learning, and autonomy. His utopian vision, while perhaps naive concerning ethical complexities, highlighted the potential for AI to liberate humanity and foster progress. He challenged the prevailing philosophical dogma of human exceptionalism in intelligence and implicitly opened a door for a more mechanistic and integrated view of mind and machine.

In a contemporary world grappling with the rapid advancements and ethical dilemmas of AI, revisiting Tesla's foundational ideas offers valuable perspective. His work reminds us that the philosophical questions surrounding artificial intelligence are not novel, but rather echoes of inquiries posed by visionary thinkers who dared to imagine machines that transcended mere mechanism. Tesla's legacy, therefore, extends beyond the patents and power plants; it resides also in his profound, if nascent, contributions to the philosophy of mind, technology, and the future of intelligent life. His vision of artificial intelligence was a remarkable blend of foresight and imagination. While it provided a foundation for future exploration, the lack of technical detail, oversimplification of human cognition, and insufficient consideration of ethical implications limit its

applicability in the contemporary AI landscape. Modern AI development continues to evolve, building upon the foundational ideas of pioneers like Tesla while addressing the complexities and challenges that he could not have foreseen.

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