

HISTORY OF SCIENCE

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Artificial Intelligence and robotics in Ancient Times: Between myth and interpretation

***Abstract.** This research examines the concept of artificial intelligence and robotics across ancient times, where philosophers and scientists in ancient civilizations such as Greece and China sought to imagine beings capable of thinking and interacting, thus embodying humanity's desire to transcend the limits of its biological capabilities. These ideas manifest in mythical figures such as the "Golem" and "Automata" indicating the human preoccupation with the idea of creating intelligent beings. The study is of significant importance by helping us understand the historical roots of the cultural visions that have shaped the concept of artificial intelligence today. It also raises issues regarding the boundaries between myth and reality and what can actually be achieved. These issues relate to human ambitions versus technological possibilities, raising questions about ethics and the necessity of setting limits on these innovations. Additionally, this topic contributes to the analysis of philosophical and cultural thought in human and machine interactions, that strengthens our comprehension of the complex interaction between humans and technology in the contemporary world. Thus, this topic represents a bridge between the past and the future, where ancient myths can help guide us toward a future of artificial intelligence and robotics with a human and ethical character. It is worth noting that the evocation of these ancient visions is not limited to the historical dimension alone, but also opens the way for us to understand how human imagination has always been the primary driving force behind scientific and technological progress. The myths crafted by ancient civilizations were not merely symbolic tales; rather, they constituted an initial framework for reflecting on issues that remain relevant today, such as the boundaries of consciousness, the possibility of simulating the human mind, and the question of what it means to be human. Re-reading these myths in light of current developments in artificial intelligence and robotics offers us*



an opportunity to reshape our relationship with technology – not merely as a useful tool, but as a cultural and ethical force that demands critical awareness and shared responsibility.

Keywords: *ancient civilizations; robots; greeks; Artificial Intelligence; myths; eternal life*

Introduction.

The idea of Artificial Intelligence (AI) and robotics is one of the most engaging topics of discussion in the modern era, showing its increasing impact on various aspects of human life. However, if we look back to ancient times, we find that these ideas were not alien to early human thinkers. Many philosophers and scientists in ancient civilizations, such as the Greeks and Chinese, sought to imagine beings capable of thinking and interacting, reflecting humanity's desire to create beings that resemble it in intelligence and thought. These ideas were represented in myths and legendary figures such as the "Golem" in Jewish culture and the "Automata" in Greek mythology, showing the human preoccupation with the idea of intelligent machines since ancient times. These myths were not just stories but expressions of human ambition to overcome biological limitations and to regard intelligence as a trait that could be embedded in non-human beings. The significance of this topic lies in understanding the historical roots and cultural visions that contributed to the formation of the concept of artificial intelligence and robotics today. Exploring ancient times gives us deep insights into how these concepts evolved, and the role of philosophy and religion in shaping humanity's perception of these beings. However, these visions also raise several issues concerning the boundaries between myth and reality, and what can actually be achieved through technology.

The problem arises from the disparity between human ambitions and the available technological possibilities. Many seek to develop artificial intelligence inspired by these myths, but questions remain about ethics and the limits that should be set in this context. How are we to interpret the human-machine relationship through these early ideas? And what dangers of crossing natural boundaries are there?

We can say that the scope of this research goes beyond a mere historical study to include a philosophical and cultural analysis of human ambitions in creating artificial intelligence and how these ambitions have reflected across the ages. Thus, this topic forms a bridge between the past and the present, providing fertile ground for discussions on the future relationship between humans and machines, and how cultural and mythical heritage can influence our contemporary approaches to innovation and technological advancement.

In our research, we have relied on a variety of sources and studies that have discussed the history of artificial intelligence in historical narratives and ancient myths, including the following:

- Adrienne Mayor (2018a, 2018b, 2018c, 2023) study;
- Ekwere (2024) study;
- Gasparetto & Scalera (2018);

- Scalera, Gasparetto, Seriani, & Gallina (2024).

Such sources are extremely important for several reasons, especially if you are working on a study that addresses symbolism or futuristic concepts (such as artificial intelligence or utopian narratives) in literature, whether classical or modern. The key aspects of their importance include:

Mythological and intellectual roots of technology and symbolism:

- these sources provide insights into how ancient civilizations imagined concepts similar to artificial intelligence and machines, through myths like talos (the bronze automaton) and pandora;

- this reinforces the idea that technological symbolism is not a product of the modern era, but has deep roots in literature and mythology.

Expanding analytical horizons:

- by linking the past with the present, these studies allow for comparisons between ancient and modern symbolic representations, enriching the reader's or researcher's understanding of the topic;

- this is particularly useful when studying the symbolism in modern utopian novels that engage with artificial intelligence or technological utopian societies.

Theoretical support and contextual analysis:

- they provide a historical and theoretical foundation for understanding the development of ideas related to artificial intelligence and technology;

- this is crucial for framing and analyzing modern symbols in utopian novels, particularly when machines or artificial intelligence are presented as symbols or metaphors.

Supporting the interdisciplinary overlap between literature, philosophy, and technology:

- these sources represent multidisciplinary approaches, which enhances the scholarly value of any study that relies on them, especially when integrating literature, mythology, and technology.

These aspects collectively emphasize the importance of these sources in bridging the gap between ancient mythological concepts and modern technological explorations, offering both historical depth and interdisciplinary connections for studies on symbolism, artificial intelligence, and futuristic narratives in literature.

Originality of the Study.

Whereas earlier works had for the most part consisted of either the technical development of automata or the philosophizing and myth-constructing nature of man-made objects, the paper conducts an exhaustive treatment on ancient robotics and artificial intelligence situated between myths as well as analytical commentary. Exploring both fictional accounts (like Talos, Pandora, Chinese and Indian automata) and ancient mechanical inventions, it reveals the conceptual connection between early realization of technology and imagination. Provides a conceptual map, as described by the figures in the paper, which outlines the evolution of the mythological mode of imagining to the modern understanding of artificial intelligence, thereby offering a

pictorial tool never before available in the literature. Under this paradigm, the present work completes the gap in the literature by interweaving so far unrelated elements of mythology, ethics, and mechanical engineering. It also situates itself in the history allowing for an intrinsic understanding of the evolution of artificial intelligence.

Study Methodology.

The historical approach in studying a topic like "Artificial Intelligence and Robots in Ancient Times: Between Myth and Interpretation" is fundamental because it allows the researcher to track the development of concepts and perceptions related to technology and artificial intelligence across different eras. The importance of this approach lies in:

1. Reconstructing historical and cultural contexts. Through this approach, we can understand how ancient civilizations perceived technology and artificial beings, like robots, within a mythical or philosophical framework. This helps in understanding how these ideas developed and transitioned to modern civilizations.
2. Tracking the evolution of perceptions. The historical approach helps track the perceptions of artificial intelligence that existed in ancient times, and how these ideas inspired modern thinkers and scientists. For example, studying myths like "Talos" or "Pandora" provides insight into the early origins of the idea of beings that mimic humans.
3. Connecting the past with the present. The historical approach allows for connecting ancient myths and philosophical ideas with contemporary concepts in artificial intelligence. This connection enhances a deeper understanding of how technology and our perceptions of it have evolved over time and how myths have contributed to shaping this perception.
4. Drawing lessons. Through this approach, we can derive lessons and insights from ancient human experiences in dealing with artificial beings and technology.

In short, the historical approach is an effective tool for understanding the cultural, philosophical, and historical roots that shaped modern perceptions of artificial intelligence. Through it, we don't just study the facts and developments of today, but also the origins of these concepts in ancient times, offering a broader and deeper perspective in AI studies.

Sources on artificial intelligence and robots in ancient times were gathered with a focus on studies that avoided the history of these ideas early in their development. Some of the sources were interpreted using a historical-analytical analysis, and all of them were peer-reviewed scholarly articles. The research also explains the criteria used to select references, whether ancient or existing studies on early mechanical machines.

Besides, a survey of recent literature found that there was increasing interest in research comparing myth and early technology, with increasing focus on the ethical and historical implications of artificial intelligence, and comparative research across cultures in determining the evolution of ideas about smart machines and artificial persons.

What is Artificial Intelligence?

Artificial intelligence (AI) is a field that aims to create systems capable of mimicking human cognitive functions. It involves developing technologies that can perform various tasks traditionally requiring human intelligence. (Jiang et al, 2017; Kovanov, 2024)

Key aspects and capabilities of AI include:

- Mimicking Human. Intelligence AI systems are designed to simulate human-like thought processes, reasoning, and learning abilities. (Jiang et al, 2017; Bubeck et al, 2023);

- Problem-Solving. AI can solve complex problems through methods like searching, logical reasoning, planning, and making decisions under uncertainty. (Sumadevi,2024);

- Learning. A significant component of AI is the ability to learn from observations and data, utilizing techniques such as machine learning, neural networks, and reinforcement learning. Modern AI models, like large language models, are trained on vast datasets and can exhibit general intelligence across diverse tasks such as mathematics, coding, and vision, often performing at or near human-level capabilities. (Negnevitsky, 2005);

- Applications. AI is applied across numerous domains, including healthcare for diagnosis, treatment recommendations, and patient engagement; service industries for automating tasks; and various scientific research areas (Alowais et al, 2023);

- Components and Techniques. The field encompasses methods such as rule-based expert systems, fuzzy expert systems, artificial neural networks, evolutionary computation, and natural language processing. Recent advancements include "foundation models" and "generalist medical AI" that can perform diverse tasks with minimal specific training data (Alowais et al, 2023).

The goal is to develop intelligent agents that can perceive their environment and take actions to maximize their chances of achieving goals.

Previously, specialists handled everything related to software and applications, from their creation to their updates, development, and final release on the internet. Now, AI performs all those tasks, often surpassing the ability and potential of some specialists in their respective fields. The goal behind this is to create systems and data that are available for self-learning without human intervention and with abilities that exceed human capabilities. This is achieved by feeding large and highly accurate amounts of data into the computer, enabling it to answer any question according to patterns and algorithms, eventually allowing it to work independently in the future, AI can save the time and effort spent by specialists in creating data or software related to a specific knowledge base. Instead of spending extensive time on these tasks, AI tools can generate such data in minutes or even seconds (Floridi, 2023).

The fields of AI are vast and varied. It is not limited to extracting educational knowledge data or creating visual, auditory, or written content. AI has advanced to perform practical tasks that substitute for human labor, such as programming factory machines, performing administrative tasks like archiving, writing programming code,

developing websites, and others, with minimal errors, or with error rates significantly lower than those associated with human work (Renda & Engler, 2023).

The rapid and phenomenal rise of AI technology has finally rattled the confidence of many specialists in their respective fields and caused a widespread reluctance among programmers and electronics experts to venture into this domain. This is because, with the AI revolution, the need for many of these programmers has diminished, as the better and more efficient alternatives are now available for free (Alalaq, 2025; Ahmad et al., 2023).

With the rapid acceleration of the artificial intelligence revolution, intelligent robots have emerged as one of its most prominent achievements. These robots now possess advanced capabilities in self-learning, adapting to various environments, and making independent decisions without direct human intervention. Robotics as a field has witnessed remarkable development since its inception, contributing to profound transformations across numerous industries and societies—from manufacturing and healthcare to education and logistics (Trovato, Mavridis, Huerta-Mercado, & Chellali, 2021).

The field of robotics has witnessed significant advancement, driven by progress in artificial intelligence and machine learning technologies. These developments have enabled robots to learn autonomously and make independent decisions. Additionally, precise sensors and advanced actuators have enhanced robots' ability to interact with their environment, while innovations in materials science have improved their flexibility and durability (Wang & Siau, 2019).

This evolution has had a clear impact across various sectors. In industry, automation has boosted efficiency and reduced costs. In healthcare, robotic systems have improved surgical outcomes and opened new possibilities in medical procedures. Moreover, robots are playing an increasingly prominent role in everyday life, such as in autonomous vehicles and personal assistants (Raj & Kos, 2022).

Ancient Greek and Roman Myths.

People have been fascinated with the thought of building artificial beings that think and act like humans—or even gods—since ancient times. Long before anyone said "artificial intelligence" old myths were packed with these ideas. Take Greek mythology: Hephaestus, the god known for his craftsmanship, made things like the bronze giant Talos, who stood watch over Crete. He also built golden maidens to help him out in his workshop. This urge to create thinking machines runs deep (Ekwere, 2024). Hephaestus is also credited with creating other mechanisms, such as the golden maidens and the three-legged wheeled carriers, which served both practical and symbolic purposes. These creations were not only marvels of engineering but also reflected societal attitudes of the time, particularly the desire to replace human labor with artificial counterparts (Silverman, 2022; Marcinkowski & Wilgaux, 2004).

Centuries before the advent of robots, the ancient Greeks had already imagined technological beings and forms of artificial life. Both ancient and modern perspectives on technological entities offer us a way to think about the meaning of being human,

raising questions about the boundaries between the natural and the artificial, between the human and the non-human, between slavery and freedom, and between mortality and immortality. The narratives about automatons (self-moving machines), such as those presented by Philo and Hero of Alexandria, show that such innovations were not mere products of imagination. Long before science fiction literature depicted dystopian worlds caused by technological human-like beings, the ancient Greeks and Romans expressed concerns about such entities. In ancient literature, robots vary from the beneficial, like the golden maids made by Hephaestus, to the destructive, like Pandora and Talos (see Figure 1). Furthermore, the statue of Pygmalion's Galatea, which closely resembles Pandora, inspired many contemporary works of art, such as the films *Ex Machina* and *Her*. Themes from the stories of Pandora and Galatea appear frequently in 20th and 21st-century literature, such as in the works of Isaac Asimov, Philip K. Dick, and the many films based on their writings (Donovan, 2023).



Figure 1. An imaginary image of the robot (Talos) (Markham, 2023).

The bronze robot Talos and the artificial woman Pandora pop up early in Greek stories, with Hesiod mentioning them way back around 700 BCE. Some old accounts even show the Trojan Horse as a sort of moving statue. Artists loved these ideas, so you'll find Talos, Pandora, and the Horse in vase paintings and other ancient art. Homer was the first to use the word "Automaton" which means something that acts on its own. He used it to talk about the wild inventions of Hephaestus—the god of blacksmiths, inventors, and tech. Hephaestus didn't hold back. He built self-walking tripod stands, automatic bellows, a chair that trapped whoever sat down, mechanical gates, robot guard dogs, and even a whole crew of golden robot servants. (Mayor, 2018a). The earliest artistic depictions of Talos and Pandora appear on Greek vases dating back to the 5th century BCE. The earliest artistic representation of the Trojan Horse is on an ancient vase dating back to around 670 BCE. The recording of this literary and artistic

evidence, over two thousand years old, marks a significant milestone in the history of ancient technology (Mayor, 2023).

The construction of Talos and other bronze figures, and their ability to perform specific tasks, makes them one of the earliest ideas of a robot of ancient Greek philosophy (Christodoulou & Tsoucalas, 2023; Donovan, 2023), indicating the level of automation that was developed in the mythological era (Figure 2). Talos exemplifies the modern definition of a robot, containing an internal mechanism and its own source of energy. According to ancient texts, a vein or conduit extended from his head to his feet, a tube that pulsed with 'ichor,' the vital fluid that flowed through the veins of the immortal gods (Mayor, 2023). Talos was half machine and half human, walking around the island at high speed three times a day, searching for strangers. "Programmed" with something akin to artificial intelligence, he was capable of interpreting his surroundings and interacting with them. When he saw invaders approaching by sea, he threw rocks to sink their ships from a distance. Talos would heat his bronze body until it turned red and crush men to his chest, roasting them alive. Jason and his Argonauts, in the myth, defeated Talos with the help of sorceress Medea, who knew where Talos' weak spot was and she also understood that despite his metallic heart that is not powered by electricity but magic his body had its limits as he looked half-man/half-machine. Talos, on Medea's persuasion, allowed Jason to take out the bolt from his ankle, which let the ichor or life fluid pour out and made him hemorrhage to death (Mayor, 2023).



Figure 2. A silver coin depicting Talos with wings and rocks on each hand. 5th century BC (Lykiardopoulou, 2023).

Talos' role in mythology extends beyond his physical form; he symbolizes the power and potential of technology, where machines were designed to serve and protect

human interests. His bronze body and mechanical movements also represent the fusion of natural and artificial elements, blurring the lines between living beings and machines (Liveley, 2023). This highlights how the evolution of modern artificial intelligence systems reflects humanity's ongoing fascination with creating machines that can think and act independently. While Talos was a product of mythical imagination, his conception laid the groundwork for the philosophical and technological explorations that would follow in the centuries to come (Duymaz & Şahin, 2023; Christodoulou & Tsoucalas, 2023).

We can say that the story of Talos shows that the ancient Greeks anticipated that artificial intelligence, similar to humans, should take a human form and have a similar bodily structure. However, it should be capable of accomplishing things that humans cannot. For instance, Talos was able to turn into fire and ward off enemies, something humans are incapable of doing.

Pandora: The First Artificial Human.

Pandora, another invention of Hephaestus, is often regarded as the first artificial human (see Figure 3). She was made from clay and gifted with life by the gods, sent to Earth as a punishment for humanity. Her story raises questions about the boundaries between natural and artificial life, as well as the ethical implications of creating sentient beings (Mayor, 2023; Domouzi & Bär, 2024; Koetsier, 2019).

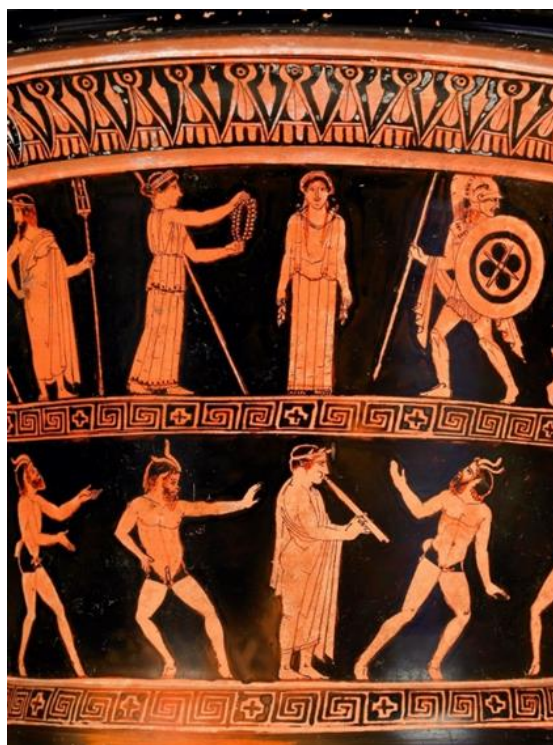


Figure 3. A vessel depicting the creation of Pandora. In the upper row, Pandora stands in the center facing forward, a position typically used for inanimate beings. To her left stand Athena and Poseidon, and to her right stands Ares, looking at Hermes. In the lower row, there is a chorus of Panes. 5th century BC (Lykiardopoulou, 2023).

Pandora – a fascinating creature often referred to by Mayor as the "robotic female". Pandora was sent to Earth with a jar to be the wife of Epimetheus, the brother of Prometheus. Although Prometheus warned Epimetheus against accepting gifts from Zeus, Epimetheus took Pandora as his wife but forbade her from opening the jar. However, it was Zeus who had commanded (or perhaps programmed) her to open the jar. When she finally did, all the afflictions of humanity—diseases, aging, madness, famine, and all kinds of suffering and misery—were unleashed (Hurt, 2022).

Name In the history of Pandora, your future is titled "all gifts", a reference to all the gods that worked on her production after she was created in Hephaestus' forge. Hermes followed the seductive lady to Earth and Pandora was married as a bride to Epimetheus. As dowry, she came with the sealed, mysterious jar of ill haps that held additional "gifts" as well. Pandora was herself created as punishment for humanity accepting the gift of fire from Prometheus. In essence, she was a female robot with no parents or childhood memories and no feelings whatsoever and she would never age and die" She was made to do only one wicked act: to go into the world of men and open the jar. The ancient image of Pandora dancing with fear as an evil cloud comes forth out of the jar is new. Similarly, the sickening image of hope coming out of the jar to calm men's hearts is new too. In Greek representations, Pandora is also depicted as a clever trick: the most celebrated vase painting of her consists of a young woman standing boldly with a creeping smile (Mayor, 2018c).

Trojan Horse: A Marvel of Engineering.

The Trojan Horse, although not strictly a robot, is another example of Greek ingenuity in creating self-moving entities (see Figure 4). In some accounts, the Trojan Horse is depicted as a moving statue, focusing on the fusion of technology and art in ancient Greek thought (Mayor, 2023; Domouzi & Bär, 2024).

Furthermore, the ancient Greeks explored concepts of mind, intelligence, and consciousness through their philosophical research, especially in the works of philosophers such as Plato and Aristotle. Although their understanding of intelligence was based on human perception rather than mechanical computation, their ideas about the nature of intelligence and logic laid the foundation for future discussions on artificial intelligence (Andrion, 2023).

Many stories are also mentioned that the inventors created things called "automata", which were mechanical and moved independently of human intervention. The term "automatic" comes from ancient Greek, which means "plays of the will", and one of the first items of an automatic comes from about 400 BC, referring to a mechanical pigeon invented by a friend of philosopher Plato. Many years later, Leonardo da Vinci invented one of the most well – known slots around 1495 AD. (Tableau, n.d.).

Many of the crucial methodological issues surrounding artificial intelligence have echoed through the field of philosophy for millennia. Philosophers as diverse as Aristotle, Saint Thomas Aquinas, William of Ockham, René Descartes, Thomas Hobbes, and Gottfried W. Leibniz posed skeptical questions like the following ones:

"What are the basic processes of cognition?", "What must the formal language do in order to provide an adequate medium for accurately and uniquely describing the world?", and "Can thought be automated?" (Flasiński, 2016). All of these questions were of interest to scholars of ancient times and are, in themselves, hypotheses related to the possibility of developing machines that can think as humans do and perform their daily tasks and work.



Figure 4. The horse's hind leg is unfinished. On the wall behind of Athena, goddess of crafts and wisdom, creating a clay model of a realistic Trojan horse to be cast in bronze (Mayor, 2023).

Greek engineering also demonstrated these innovative ways of extending human elements to include machines and similar technologies. Shortly after the beginning of the Anno Domini era, an engineer named Ctesibius invented hundreds of machines using hydraulics and pneumatics, which were engines that worked automatically using compressed air. His other works included steam-powered military turbines. Around 400 BC, Before the end of the fifth century BC the polymath Archytas invented a mechanical bird powered by steam. Later, scientists invented moving figures capable of making sounds, opening doors, and even attacking. These methods of automation formed the primitive approaches to attributing human traits to machines (Ahistoryofai, n. d.).

Ancient Chinese Civilization.

The concept of robotics is rooted in ancient Chinese history, both in myth and early mechanical inventions. Historical accounts suggest that the idea of automata was not only prevalent in Western civilizations but also found expression in ancient China, where inventors like King-su Tse created mechanical devices around 500 BC. This reflects a broader human fascination with artificial beings designed to perform tasks traditionally carried out by humans.

There are references to "King-su Tse" in classical China, who invented a self-moving machine (automaton) around 500 BC. Archytas of Tarentum (circa 400 BC) is considered the father of mechanical engineering and one of the classical masters of Western robotics (Fron & Korn, 2019).

Ancient texts also describe Yan Shi, a craftsman who created automated machines capable of singing and dancing. Yan Shi used a system of gears and pulleys to move the machines, demonstrating his early understanding of mechanical engineering. King-su Tse is renowned for his creation of automata, showcasing early Chinese ingenuity in the field of robotics (Sánchez Martín et al., 2007). These inventions were often designed for entertainment or to demonstrate technological prowess, similar to their Western counterparts. The creation of robots in ancient China can be seen as a reflection of societal values, where technology was intertwined with myths and philosophy (Fron & Korn, 2019).

Chinese myths also highlight artificial intelligence. Yueying Huang, the wife of the famous Chinese historical advisor Zhuge Liang, was skilled in making "artificially intelligent machines". It is said that Zhuge Liang was so impressed by her intelligence that he decided to marry her. When he first visited Huang's home, he was greeted by two large dogs. The dogs rushed towards him aggressively, prompting two servants to strike their foreheads and stop them. Upon closer inspection, Zhuge Liang discovered that the dogs were, in fact, wooden machines. He laughed, showing his appreciation for Huang's wisdom. These mechanical dogs represent another form of artificial intelligence in ancient folklore. They suggest that humans should have the ability to start or stop artificial intelligence. When given a stop signal, the mechanical dogs immediately cease (Tian, 2017).

Ancient Indian Civilization.

In Hindu mythology, King Ravana had a flying chariot called *Pushpaka Vimana*, which was capable of moving independently and following his commands (Ekwere, 2024). Buddhist myths from the fourth and third centuries BC, focusing on northeastern India, tell of an army of machines guarding the relics of Buddha, created with knowledge smuggled from the Greek-speaking world. In one of them, where the robot killers as well as the robot guards coexist, there was a young man who disguised himself and went to the country of Yavana so as to learn the trade of constructing machines, the tightly kept secret of the Yantakāras (machine craftsmen). He then snatched the knowledge and made the first artificial guards. There exist accounts of robotic warriors who protected Buddha's relics in Chinese, Sanskrit, Hindu, as well as Tibetan literature (Truitt, 2021).

Between the second and fourth centuries, the Buddhist tale of an alluring female robot appeared in *Mahāvastu*. This lifelike girl, known as *Yantrāputrikā* ("the mechanical girl"), captivated an artist who was called by the robot's inventor. When the artist touched the robot, it broke into pieces. The artist took revenge on the inventor by creating a hanging corpse of himself. When the inventor woke up and believed the artist had died, he alerted the king. Upon the king's arrival with ministers and other citizens to witness the scene, the artist emerged from his hiding place and revealed that the corpse was a fake, showcasing the lifelike realism of both the robot and the corpse—illusions of self-control. The Buddhist saying "We are all robots" reflects the lack of spirit in all beings. Robotic guards appeared in Buddhist mythology during the reigns of Kings *Ajatashatru* and *Ashoka* in India. Ajatashatru designed robotic warriors to defend Buddha's relics using a powerful catapult and war chariot. The chariot was a robot with rotating clubs and swords. These robots were inspired by Greek-Roman machines, as King Ashoka communicated with Hellenistic rulers via ambassadors (Ahistoryofai, n. d.).

Since ancient times, human imagination has been preoccupied with the possibility of creating humanoid beings capable of movement, decision-making, and sometimes even thinking. These ideas clearly appeared in Greek mythology, such as in the tale of *Talos*. With the evolution of science fiction in the 19th and 20th centuries, these ideas became more aligned with science, as seen in works like Mary Shelley's novel *Frankenstein*, which can be considered the first literary depiction of creating an intelligent being through technology. This type of literature later inspired developers and scientists to dream of producing intelligence that could think and interact with humans (Shelley, 2020).

Moreover, the Roman civilization witnessed the production of a heritage that spoke of intelligent robots. It is said that the Roman poet Vergil has designed a series of wood sculptures, each representing a province of the Roman Empire, which plays a clock if the province was threatened with rebellion. A bronze rider pointed to danger. In Troy's book history we find six Golden Mechanical Devices, including four robot machines, which monitored the entire Trojan court for any deficiency in dress, behavior, speech or even in mind, while we also provided entertainment. (Trovato,

Mavridis, Huerta-Mercado, & Chellali, 2021). Courtiers could relax, knowing they wouldn't make any unintentional mistakes, and neither would anyone else, while rulers could relax, knowing that no one in the Trojan court was spreading misinformation or conspiring against them. Philip II "the Good," Duke of Burgundy, used part of his vast wealth to install many automata, trick fountains, and other mechanical devices in his castle of Hesdin in Artois, where guests found themselves tested in a long corridor filled with automata and other devices that drenched them with water, covered them in dirt and flour, struck them with sticks, and cursed them with foul names, while the duke or his agents watched without being seen (Truitt, 2021).

Thus, the roots of artificial intelligence stem not only from modern technological developments but from a long history of myths and stories that have shaped human imagination around robots and artificial consciousness.

Ancient Egypt.

The ancient era witnessed remarkable achievements in the creation of automated devices and mechanical servants across multiple civilizations. From the priest-operated statues of ancient Egypt around 2500 BCE to the sophisticated automata described in Chinese texts and the mechanical marvels of Hellenistic engineers, ancient peoples demonstrated extraordinary creativity in designing self-operating machines. These early robots served various purposes: religious devices that inspired awe in temple visitors, entertainment automata that delighted royal courts, practical mechanisms for timekeeping and water distribution, and philosophical demonstrations of mechanical principles. The technological innovations of this period, including the use of hydraulics, pneumatics, cam mechanisms, and feedback systems, established fundamental principles that would influence automation and robotics for centuries to come (Al-Masry Al-Youm, 2022).

In ancient Egypt, early attempts emerged to create self-operating machines and mechanical devices that amazed people and served both religious and practical purposes. Around 2500 BCE, priests used hollow statues in which they could hide and manipulate movable parts to make the public believe the statues were alive, thereby reinforcing awe and religious devotion. By 2000 BCE, mechanical theatrical models appeared, such as a platform on which three dwarfs stood, moving through an interconnected system of rollers and strings to perform dances. In the sixteenth century BCE, the Egyptian official Amenemhat was credited with inventing the water clock, one of the earliest instruments for measuring time. Texts dating to around 1100 BCE also described moving statues built with relatively advanced mechanical techniques. During the Ptolemaic era in Alexandria, the inventor Ctesibius (285–250 BCE) distinguished himself by creating musical instruments such as the water organ, self-regulating water clocks, moving statues, and mechanisms based on compressed air and bronze springs. Engineers in Alexandria continued in the third century BCE to develop moving figures of humans, animals, and mythological beings, integrating them into royal ceremonies. Thus, it becomes clear that ancient Egypt was not only the cradle of religious and political civilization but also a pioneer in laying the earliest foundations

of automata, which would later influence the course of mechanics and robotics throughout the ages (Colwell, 2025).

Ancient Myths as Intellectual Roots for Contemporary Artificial Intelligence.

Modern studies reveal that ancient myths were not merely symbolic tales but served as early frameworks for understanding the concept of “artificial intelligence” long before it evolved into a scientific and technological pursuit. Research published in various journals highlights this connection:

1. “The Journey of Artificial Intelligence Through Time: From Homeric Myths to Modern Algorithms” (Mohsen, 2025) – This recent article explores the evolution of the idea from myths such as Homer’s *Talos* to Aristotelian philosophy and ultimately to contemporary algorithmic systems.

2. Recent academic research in philosophy and the history of technology indicates that myths like *Prometheus* and *Icarus* are being revisited today as symbolic frameworks for understanding the ethical risks of AI – such as excessive ambition and the defiance of natural limits.

3. The *Handbook of Geospatial Artificial Intelligence* (Couclelis, 2023) discusses the evolution of geospatial AI from its mythological roots, such as the legend of *Talos*, to its modern scientific manifestations from Turing to the present day. The work shows how general and specialized meanings of AI intersect, ranging from programming and neural networks to speculation and humanism, within a broader debate on the boundaries and potential of intelligence.

4. A study in the *European Journal of Therapeutics* titled “From Ancient Mythology to Modern Technology: The Historical Evolution of Artificial Intelligence” (Duymaz & Şahin, 2023) demonstrates that ancient myths – such as that of *Talos* and other intelligent autonomous beings – reflect humanity’s early imagination of artificial intelligence. This symbolic heritage has persisted throughout history, finding tangible expression in modern innovations like robots and surgical systems, revealing a profound continuity between mythic past and technological present.

5. Digital anthropology studies show that modern societies continue to use mythological archetypes – such as the “obedient servant” and the “rebellious monster” – to interpret artificial intelligence, just as myths once served to explain natural phenomena.

6. An article published in *SAGE Journal* under the title “Artificial Life” (Belk, Humayun, & Gopaldas, 2020) emphasizes that attempts to create “artificial life” date back to ancient myths. Cultural symbols such as *Pygmalion*, *the Golem*, *Frankenstein*, and *Metropolis* continue to influence public perception of modern technologies. The study highlights that contemporary approaches to Artificial Life (AL) span biochemical, mechanical, and computational domains and extend into posthumanist thought – calling for ethical frameworks that balance scientific ambition with human dignity and safety.

Collectively, these and other studies demonstrate how mythological figures like *Prometheus* and *Talos* have been revived to interpret the aspirations and risks associated with artificial intelligence. Philosophical and historical research suggests that such myths functioned as an “imaginary laboratory,” shaping early conceptions of non-human beings. This explains the deep historical continuity between mythic imagination and scientific innovation. Thus, analyzing these paradigms offers a deeper understanding of the intellectual roots of AI, revealing that today’s technological reality is not a rupture with the past, but rather an extension of a long-standing dialogue between symbol and reality (see Figure 5).

Ancient Myths' Impact on Modern AI Development

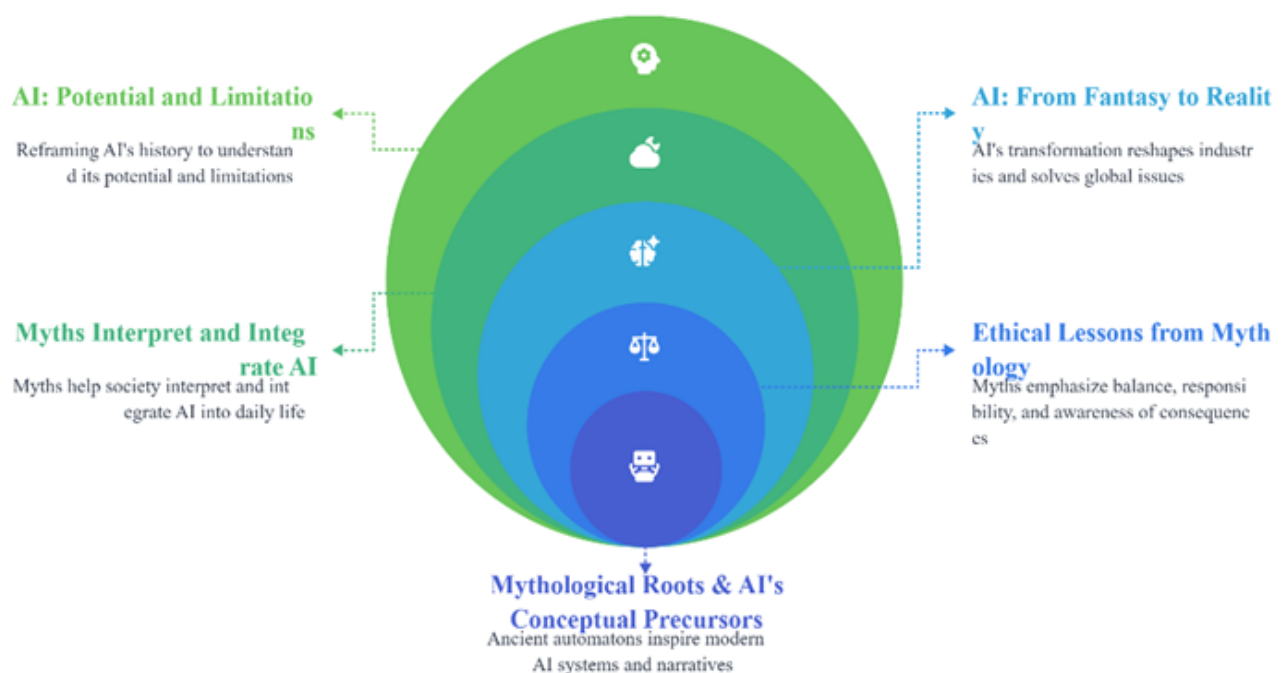


Figure 5. The influence of ancient myths on the development of modern Artificial Intelligence (Author' Source).

Let's take a look at this figure from a historical angle – It's not just a cluster of overlapping circles, but a map that links the mythic past to our tech-savvy present.

1. The mythical origins and the start of the concep. Right in the middle, we've got "mythical roots and the early beginnings of AI. Historically, since the earliest civilizations (Sumerian, Egyptian, Greek), people have always dreamed up or thought of artificial beings or gods giving them wisdom. The myth of Prometheus, who gave fire to humans, or Talos, the bronze man of Greek mythology, are early models of a non-human entity with extraordinary powers. This mythological idea was the first spark that led to the concept of making an "artificial mind.

2. Ethical lessons from myths .The second layer points to “ethical lessons.” Myths weren't just random tales; they were cautionary tales, like the story of Icarus, who flew too close to the sun with his wax wings and ended up crashing. This symbolism is like

today's talks about the dangers of AI: pushing too far, being overconfident in science, and needing to be responsible.

3. From imagination to reality. The Industrial Revolution and the 20th century turned myths into legit science projects, what used to be in epic tales got turned into calculators, robots, and then smart systems Here we see how humanity's intellectual history shifted from "mythical dream" to "technological reality," just as myths about nature eventually became astronomy and medicine.

4. Myths as tools for interpreting modernity. Societies have always needed symbols to make sense of the new stuff. Just as people in the past turned to myths to understand the natural world, today we turn to them to describe artificial intelligence and technological developments:

- Is it a "loyal servant" like the enchanted gadgets in those old stories?
- Is it like a "threat" from those wild, mythical beasts that go against the norm?

This shows historical continuity: Humans deal with the unknown by telling stories that have deeper meanings.

5. Potentials and limits of artificial intelligence :the outer layer shows us that every progress has its boundaries. Modern history draws boundaries between humans and machines, just like myths did between humans and gods.

This historical dimension reminds us that every technological innovation is an extension of the ancient struggle between human ambition and natural or ethical constraints.

The figure illustrates that artificial intelligence is not merely a modern invention, but the continuation of a long trajectory beginning with ancient myths, passing through philosophy and ethics, and eventually transforming into science and technology. Myths acted as the "*first laboratory*" for humanity's ideas about non-human minds.

Ancient myths and early technological innovations formed a mirror reflecting humanity's conception of the idea of "artificial life" since the earliest ages. From the first civilizations, imagination was never separate from practical experience; rather, myth intertwined with early engineering attempts to embody the notion of manufactured beings or intelligent machines. This overlap between the symbolic and the scientific dimensions produced a rich legacy of examples that combine mythological imagination with mechanical innovation, making the study of these models a gateway to understanding the roots of thought on artificial intelligence and robotics throughout history.

In addition to what has been previously mentioned in the course of the research, Table 1 below presents analytical examples of the most prominent models introduced by the Egyptian, Indian, Chinese, Greek, and Roman civilizations, showing how they varied between myth and historical interpretation (Mayor, 2018b; Singh, G., Bhadauria, & Singh, S., 2025; Roy, 2021; Mingren, 2016; Truitt, 2021; LaGrandeur, 2012; Duymaz & Şahin, 2023).

Table 1. Analytical examples of the most prominent models (Author' Source).

Civilization	Time Period	Main Examples	Interpretation: Between Myth and Explanation
Ancient Egyptian	Around 3000 B.C. – 30 B.C.	Moving Shabti statues in tombs, and divine statues moving in temples using hydraulic or magical mechanisms, such as those that move or speak to serve the gods or the dead.	Mythically: Manufactured beings not born, reflecting a belief in divine artificial life. Historically: References to simple mechanisms such as statues moving by steam or pulleys, reflecting early engineering progress that influenced later civilizations.
Ancient Indian	Around 1500 B.C. – 500 B.C. (the Vedas and epics)	Yantra as mechanical devices or robots, such as Yantra-Purusha (human robots) in the Mahabharata and Ramayana; Pushpaka Vimana (intelligent flying craft); Buddha's guards as robots in myths.	Mythically: Artificial beings created by the god Vishwakarma or the sorcerer Maya, reflecting ideas of artificial intelligence that protects or serves. Historically: References to advanced engineering devices in Vedic texts, such as automated systems resembling modern robots, with philosophical links to intelligence.
Ancient Chinese	Around 2000 B.C. – 220 A.D. (Xia, Qin, and Han dynasties)	Mechanical dolls that dance or sing in the text <i>Liezi</i> ; inventions of Zhang Heng such as the automatic seismograph; mechanical automata such as the South-Pointing Chariot.	Mythically: Stories of artificial living beings, such as a mechanical singer deceiving the king. Historically: Real advanced mechanical devices, such as water clocks and moving dolls, reflecting engineering progress resembling primitive robots.
Ancient Greek	Around 800 B.C. – 146 B.C.	Talos, the bronze guardian robot; Hephaestus' automata such as golden maidservants; Pandora as an artificial being; Hero of Alexandria's devices such as automatic doors and hydraulic machines.	Mythically: Beings created by the gods, expressing dreams of artificial life. Historically: Real engineering innovations such as steam and automatic machines, a prelude to artificial intelligence.
Ancient Roman	Around 753 B.C. – 476 A.D.	Continuation of Greek myths such as Vitruvius' automata; hydraulic and mechanical devices in theaters and temples; stories of moving statues and war machines.	Mythically: Repetition of Greek myths with a focus on control and danger. Historically: Practical applications of Greek devices, such as the hydraulic organ and automatic machines, with links to military engineering.

Conclusion and Future Trends.

The historical interest in artificial intelligence and robotics reveals a long journey of intellectual explorations and practical experiments. Perspectives on these modern technologies vary, ranging from concerns about losing control over what we have created, to great hopes for improving the quality of life and enhancing human capabilities.

The development of artificial intelligence from old myths to modern applications reflects the changes that occur in our understanding of the world around us. In this context, we see that a balanced and durable understanding of this technique gives us a

challenge for us, which requires considerable thinking and insight into how it should be used to ensure progress without compromising human values.

In conclusion, drawing lessons from ancient myths and stories gives us keys to understanding the complex relationships between humans and technology. As we look toward the future, we must strive to create an open dialogue that includes all concerned parties, including scientists, philosophers, and communities, to ensure that the course of artificial intelligence serves humanity and achieves the necessary balance between innovation and responsibility. If used wisely, artificial intelligence and robotics can contribute to building a better, more harmonious, and cohesive world.

The near future of industrial robotics lies in the transition from the “automated machine” to the “intelligent partner”, enhancing productivity and reshaping the relationship between humans and technology within a more ethically and environmentally conscious framework.

Historical studies on the development of industrial robots, from *Unimate* to the *Delta Robot*, indicate that the future is moving toward a new phase characterized by adaptive intelligence and human–robot collaboration. Robots are no longer merely mechanical tools for automation; rather, they are gradually evolving into intelligent systems capable of self-learning and interacting with dynamic work environments. The most prominent anticipated future directions Modern studies indicate that the future of industrial robotics is moving toward a new phase characterized by adaptive intelligence and close collaboration between humans and machines. In this context, several significant future directions emerge, most notably strengthening the role of collaborative robots (Cobots) that work side by side with humans in flexible and safe production environments, and integrating artificial intelligence and machine learning technologies to enable robots to make more autonomous decisions.

The future also points toward expanding into new applications beyond traditional industry—such as agriculture, healthcare, and logistics—alongside the development of smaller and more flexible robots capable of performing highly precise tasks in advanced fields such as microelectronics and medicine.

In line with global efforts toward sustainability and the green economy, robots are increasingly being employed to improve energy efficiency and reduce industrial waste (Gasparetto & Scalera, 2018). One of the most striking examples of how ancient mythological aspirations have been transformed into tangible technological achievements is the development of drawing robots. The academic study *History of Drawing Robots* (2024) documents the historical evolution of this technology, illustrating how the idea of a machine capable of imitating human creativity evolved from a philosophical dream into an advanced technological reality.

As drawing robots continue to evolve and their creative capacities expand, age-old philosophical questions persist with even greater force: Can a machine truly create? What distinguishes human art from machine-generated art? And is self-awareness a necessary condition for artistic creativity?

These questions, implicitly raised by ancient myths, find partial answers in contemporary practice, yet they remain open to philosophical and ethical debate. Thus,

the dialogue between the mythological past and the technological present continues – affirming that the fundamental questions of creativity, consciousness, and humanity transcend both temporal and technological boundaries (Scalera, Gasparetto, Seriani, Gallina, 2024).

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The author declare no conflict of interest.

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Штучний інтелект і робототехніка в давні часи: Між міфом і тлумаченням

Анотація. У цьому дослідженні розглядається концепція штучного інтелекту та робототехніки в контексті давніх часів, коли філософи й учені стародавніх цивілізацій, таких як Греція та Китай, намагалися уявити істот, здатних мислити й взаємодіяти, уособлюючи тим самим прагнення людства перевершити межі своїх біологічних можливостей. Ці ідеї проявляються в міфічних постатях, таких як Голем і Автомати, що свідчить про давнє людське захоплення ідеєю створення розумних істот. Дослідження має важливе значення, оскільки допомагає зрозуміти історичні корені культурних уявлень, які сформували сучасну концепцію штучного інтелекту. Воно також порушує питання щодо меж між міфом і реальністю та щодо того, що насправді можна досягти. Ці питання стосуються людських амбіцій у порівнянні з технологічними можливостями, порушуючи етичні аспекти та необхідність встановлення меж для таких інновацій. Крім того, дана тема сприяє аналізу філософської та культурної думки у взаємодії людини й машини, що поглиблює наше розуміння складної взаємодії між людиною та технологією в сучасному світі. Таким чином, ця тема є своєрідним мостом між минулим і майбутнім, де стародавні міфи можуть допомогти нам спрямувати розвиток штучного інтелекту та робототехніки у гуманістичному та етичному напрямі. Варто зазначити, що звернення до цих давніх уявлень не обмежується лише історичним

виміром, а й відкриває шлях до розуміння того, як людська уява завжди була головною рушійною силою наукового та технологічного прогресу. Міфи, створені стародавніми цивілізаціями, не були просто символічними оповідями; вони становили початкову основу для роздумів над питаннями, що залишаються актуальними й сьогодні – такими як межі свідомості, можливість імітації людського розуму та сутність людської природи. Переосмислення цих міфів у світлі сучасних досягнень штучного інтелекту й робототехніки дає змогу повному осмислити наше ставлення до технологій – не лише як до корисного інструменту, а як до культурної та етичної сили, що вимагає критичної свідомості та спільної відповідальності.

Ключові слова: стародавні цивілізації; роботи; греки; штучний інтелект; міфи; вічне життя

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