Yapay Zekâ: Lehte ve Aleyhte Argümanlar

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Öz

Zihin felsefesinin önem verdiği ve cevabını aradığı sorulardan birisi "makineler düşünebilir mi?" sorusudur. Bu sorunun ortaya çıkış süreci önemlidir. Bu soruyu anlamlı kılan süreç yüzyıllar öncesinden başlamıştır. İnsanın makine icat etmesi; canlıları taklit edebilen alet icat etmesi yüzyıllar öncesinde yaşanan gelişmedir. Ama XX. yüzyılda başka bir gelişme daha yaşanmıştır. Makine ve teknoloji insan hayatının ayrılmaz bir parçası haline gelmiştir. XX. yüzyılda bilimin bütün alanlarında, devrim niteliğinde yenilikler ve gelişmeler kaydedilmiştir. İnsanlık XX. yüzyılda, iki bin yılda elde ettiğinden daha fazla bilgi elde etti ve bunun sonucunda teknoloji süratle gelişerek, modern insanın hayatı için vazgeçilmez unsur haline dönüştü. Teknolojinin ürettiği ürünler, yani makinelerin insan hayatına dâhil olmasıyla, insan hayatında adeta yeni bir dönem başladı. Yaşanan gelişmeleri değerlendirirken, çevresel sorunları; savaşları, küresel iklim sorunlarını, çevresel sorunları göz önünde bulundurmak gerekir. Fakat modern hayat öyle bir noktaya gelmiştir ki, makinesiz hayat düşünülemez olmuştur. Yani teknolojinin gelişmesiyle birlikte ortaya çıkan sorunların çözümü şart olmakla birlikte modern hayat geri döndürülemez şekilde teknolojiye bağımlı hale gelmiş durumdadır. İnsanın gündelik hayatını yakından etkileyen ve neredeyse belirleyen makineler her geçen gün daha da gelişmektedir. Robot teknolojisi ve nanoteknoloji alanlarında gelişme kesintisiz devam etmektedir. Satranç turnuvasında insanı yenen robottan daha mükemmel robotlar üretilmektedir. Teknolojik gelişmeler romanlara, resimlere, filmlere de konu olmuş durumdadır. Makalemizde yapay zekâ ve yapay zekayla ilgili çalışmaların bu durumun doğal sonucu olduğunu anlatacağız. Önce Alan Turing'in tezi, akabinde o teze yöneltilebilecek olası karşı tezler ve özellikle John Searle'ün eleştirisini ele alacağız. Yapay zekânın insan zekâsından farklı olduğunu ve daha doğrusu insan zekâsı düzeyine ulaşamayacağını savunacağız. Zayıf yapay zekâ argümanlarının kuvvetli yapay zekâ argümanlarına kıyasla daha tutarlı içerik sunduğunu vurgulayarak makalemizi sonuçlandıracağız.

Anahtar Kelimeler

Felsefe Tarihi, Zihin Felsefesi, Yapay Zekâ, Alan Turing, Taklitçilik Oyunu, John Searle, Çince Odası

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Artificial Intelligence: Arguments for and Against

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Abstract

One of the questions that philosophy of mind is concerned with, and seeks to answer, is 'can machines think?' The process of coming up with this question is important. The process that makes this question meaningful began centuries ago. Man's invention of machines, the invention of tools that can imitate living things, is a development that took place centuries ago. But another development took place in the 20th century. Machines and technology have become an integral part of human life. The 20th century witnessed revolutionary innovations and developments in all fields of science. Mankind acquired more knowledge in the twentieth century than in the previous two thousand years, and as a result technology developed rapidly and became an indispensable element in the life of modern man. With the introduction of technological products, namely machines, into human life, a new era in human life has begun. However, when evaluating the developments, environmental problems, wars, global climate problems and environmental problems should be taken into consideration. However, modern life has reached such a point that life without machines is unthinkable. In other words, although problems arising from the development of technology need to be solved, modern life has become irreversibly dependent on technology. Machines that closely influence and almost determine people's daily lives are being developed more and more every day. The development of robotics and nanotechnology is unstoppable. One of the questions that philosophy of mind is concerned with, and seeks to answer, is 'can machines think? The process of arriving at this question is important. The process that makes this question meaningful began centuries ago. Man's invention of machines, the invention of tools that can imitate living things, is a development that took place centuries ago. But another development took place in the XXth century. Machines and technology have become an integral part of human life. The 20th century witnessed revolutionary innovations and developments in all fields of science. Mankind acquired more knowledge in the twentieth century than in the previous two thousand years, and as a result technology developed rapidly and became an indispensable element in the life of modern man. With the introduction of technological products, namely machines, into human life, a new era in human life has begun. However, when evaluating the developments, environmental problems, wars, global climate problems and environmental problems should be taken into consideration. However, modern life has reached such a point that life without machines is unthinkable. In other words, although problems arising from the development of technology

need to be solved, modern life has become irreversibly dependent on technology. Every day, more and more machines are being developed that have a profound impact on, and almost determine, people's daily lives. The development of robotics and nanotechnology is unstoppable.

Keywords

History of Philosophy, Philosophy of Mind, Artificial Intelligence, Alan Turing, Imitation Game, John Searle, Chinese Room

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Introduction

In the introduction to *Metaphysics*, Aristotle states that 'man naturally wants to know'. This 'desire to know' includes the knowledge of things that concern human life and affect human life positively or negatively. In this sense, developments in artificial intelligence are closely related to the natural human desire to know.

Alan Turing's prediction that "the emergence of machines that surprise man is not far off" has been confirmed seventy years after his death. Indeed, machines do surprise people with their 'intelligence'. In this case, the question "Can machines think?" or "Do machines have minds?", which was raised in the XXth century, has become one of the most important questions discussed in scientific circles. This question is related to the discussions about 'artificial intelligence'. "*Artificial intelligence is a branch of science that aims to imitate the human mind and mental processes in a machine, in other words, to create intelligent machines that think like humans.*"[1] The idea that forms the basis of discussions about artificial intelligence, as it is generally accepted, did not emerge in the twentieth century. People were concerned with similar questions before the modern era. Of course, people before the modern era were interested in whether it was possible to invent devices that could imitate living things in nature using inanimate materials. Today, the main question is whether machines have minds. In other words, it is obvious how the question has evolved.[2] Throughout history, humans have tried to invent various machines. Discussions about artificial intelligence as we understand it today began in the mid-twentieth century. These discussions became even more interesting after the publication of Alan Turing's article 'Computing Machinery and Intelligence'. "*Although the father of AI is considered to be Alan Turing, the term 'artificial intelligence' was first used in 1956 at a workshop on artificial intelligence organised by John McCarthy at Dartmouth College.*"[3]

1. Strong and Weak AI and Alan Turing's Thesis

The strong view of AI is that machines can have minds like humans. The weak view of AI is that it is not possible for machines to have minds like humans.

Alan Turing conducts a test he calls the "mimicry game". The aim of the test is to prove that machines have minds. "*In his famous article, Turing says that before asking whether it is possible for a digital machine to think, 'it is necessary to begin by defining the meanings of the words 'machine' and 'thinking'. This is because the meanings we ascribe to words can change over time, that is, their meanings can expand and contract. For this reason,*

[1] Kamuran Gödelek, *Zihin Felsefesi*. (Eskişehir: Anadolu Üniversitesi Press, 2011), 117.

[2] For information on human attempts to invent various machines throughout history, see: Güven Güzeldere, "Yapay Zekânın Dünü, Bugünü, Yarını", *Cogito*, (13) 1998, 27-41.

[3] Fatma Coşkun, H. Deniz Gülleroğlu, "Yapay Zekânın Tarih İçindeki Gelişimi ve Eğitimde Kullanılması", *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, (3) 2021, 949.

instead of giving such a definition, Turing tries to explain the question by means of a game he calls the 'imitation game'."[4] The test is as follows:

There are three rooms. These rooms are connected by a telegraph-like keyboard system. In one room there is an interrogator whose sex is not important. In the second room there is a woman and in the other room a man. The interrogator's task is to find out which room contains a man and which contains a woman. The interrogator can ask any question. Now suppose a machine is placed in the man's room. The machine is set up so that it sometimes makes miscalculations and answers questions by waiting 10-15 seconds. Can the interrogator know that the person in the room is not a man but a machine? According to Turing, this question cannot be answered with certainty. In other words, according to Turing, the probability that the machine can successfully pass this test is very high. He even claims that, thanks to the development of machine technology, future machines will be able to pass this test successfully.

1.1. Criticisms of Alan Turing

Turing was aware that his test had some flaws. He himself raised and answered arguments against his thesis. Possible arguments against Turing's thesis are

1. Theological objection.

Thinking is a function of the soul. The only being with a soul is man. Machines do not have souls. Therefore machines cannot think. Turing answers this objection as follows. God's gift of the soul and the ability to think only to human beings is a limitation of God's power. Turing answers the theological objection with theological reasoning, and also states that he does not attach importance to religious debates.

2. The head-in-the-sand argument

The consequences of machines thinking would be very bad. So we shouldn't argue about whether machines think or not. Turing does not address this objection. But in response to the objection he says that this argument is the result of man's delusion that he is a divine being.

3.Mathematical objection

The basis of the objection is Gödel's theorem. This objection, which Turing highlighted and emphasised, is summarised as follows "*Gödel's Theorem shows that in any system of logic certain propositions can be formulated which cannot be proved either positively or negatively, unless the system itself is inconsistent.*"[5] Turing stresses that in order to get out of the impasse of Gödel's theorem, it is necessary to find ways of describing logical systems

[4] Fadime Erciyes, "Turing Testinin Davranışçı ve İşlevselci Yorumu", *MetaZihin*, 7(1) 2024, 44.

[5] Alan Turing, "Bilgiişlem Makineleri ve Zekâ", *Aklın G'özü*, Eds. Douglas R. Hofstadter, Daniel C. Dennet. Trans. by. Füsun Doruker. (Istanbul: Boğaziçi Üniversitesi Yayınları, 2009), 64.

in terms of machines, and machines in terms of logical systems. Turing stresses that just as the power of machines has its shortcomings, so the power of humans is not complete.

4. The Consciousness Argument

The Consciousness Argument posits the notion that it is not possible to assert that any machine possesses consciousness unless it is capable of producing poetry and music, among other creative outputs. Turing's argument, as outlined above, approaches the issue from a first-person perspective. Turing's critique of this argument is twofold. Firstly, he contests the premise that the only way to understand a human being is to become that human being.

5. Arguments based on various obstacles

The argument is based on the premise that machines have the capacity to perform a multitude of tasks, yet there exist activities that are beyond their capabilities. To illustrate this point, it is important to note that machines are incapable of exhibiting kindness or of being the subject of their own reflections. Turing's position is that there are numerous activities which are beyond the capabilities of humans.

6. Lady Lovelace's objection

Lady Lovelace posits the notion that machines are capable of carrying out the actions which they are programmed to perform. The subjects in question are unable to act spontaneously. Turing (1950) posited the view that it is not possible to state with any certainty that machines will not surprise us. It is conceivable that the development of machine technology may reach a point at which Lady Lovelace's objection becomes moot.

7. The Continuity Argument in the Nervous System

This argument posits that a discrete machine is incapable of mimicking the behaviour of the nervous system. Turing acknowledges the validity of this objection to a certain extent, proposing that machines can present interrogators with a challenging scenario by furnishing partial yet nearly accurate responses. It is acknowledged that the interrogator would encounter difficulties in distinguishing between a differential analyser and a digital computer.

8. Argument from the unpromisingness of behaviour

This argument posits that human beings possess the capacity to contemplate alternative courses of action when confronted with impediments, such as the inability to board a bus at the main entrance. Machines are incapable of operating in such a manner. The rationale behind this objection is that, according to Turing, the laws of motion and the laws of behaviour appear to be synonymous.

9. The Argument from Extra-Sensory Perception

The Argument from Extra-Sensory Perception posits that certain individuals possess the ability to make predictions regarding future events, with a higher probability of

accuracy in their predictions. The hypothesis that machines could possess minds would necessitate the capacity to make predictions, a capability that is demonstrably absent. Turing's hypothesis posits that the resolution of the aforementioned problem is contingent upon the execution of the mimicry game within the confines of rooms that are impervious to telepathy.

1.2. Evaluation Of Alan Turing's Answers To Nine Arguments

"*Although today the Turing Test is still seen as a difficult threshold to overcome for artificial intelligence systems*"[6] Alan Turing tried to make the arguments against his thesis seem very 'simple'. The theological argument, the assertion that 'the power to think is inherent in the soul', is not only expressed by theologians. Descartes also defends the thesis that 'the power to think is reserved to the soul alone'. As Descartes hypothesises, it is the elevated temperature that engenders the movement of the body. Furthermore, elevated temperatures have been demonstrated to induce movement. This observation suggests an analogy between the body and a machine, thereby prompting the following argument. However, Descartes proposed an alternative hypothesis, asserting that the human body was created by God. Descartes' argument posits that there exist two rationales that substantiate the assertion that machines do not constitute human beings.

1. "*It is not possible for them to combine words and other signs that we use to convey our thoughts to others.*

2. Despite the fact that they may demonstrate superior performance in certain domains, it is inevitable that they will exhibit deficiencies in others, given their propensity to be influenced by the position of the organ, as opposed to being deliberate in their actions."[7]

Turing's endeavours sought to eradicate the dualist perspective within the theological discourse. However, the situation is not as simple as Turing asserts. It is evident that Turing engaged with the dualist thesis that 'the power of thinking is inherent in the soul'. In order to surmount the difficulties presented by the thesis that 'the power of thinking is inherent in the soul', he introduced the concept of theology into the discourse.

1. The faculty of thought is the domain of the human soul. 2. It is asserted that God has endowed only humankind with the faculty of the soul. 3. Consequently, the machine cannot be said to possess the faculty of thought, as it is not a sentient being. Turing refutes this reasoning as follows: The notion that God bestows a soul solely upon humankind serves to impose a limitation on the divine. The question must therefore be posed: why would an omnipotent deity not bestow a soul upon a machine? It is this author's opinion that Turing

[6] Acar, *Yapay Zekâ Fırsat Mı Yoksa Tehdit Mi*? transferring by Fatma Coşkun, H. Deniz Gülleroğlu, "Yapay Zekânın Tarih İçindeki Gelişimi ve Eğitimde Kullanılması", 953.

[7] Descartes, *Yöntem Üzerine Konuşmalar*, Trans. by. Hasan İlhan. (Ankara: Alter Yayınları, 2009), 61.

attempts to mitigate the impact of the objection by theologising it; that is to say, he seeks to remove it from the domain of philosophy.

The objection of burying one's head in the sand cannot be taken seriously. Indeed, Turing did not consider this objection to be of any significance either.

The mathematical objection is the one that Turing emphasised most and took most seriously. The proponents of the possibility of artificial intelligence take David Hilbert's claim — that all mathematical propositions can be discovered by a logic machine and that this machine can prove that any proposition is true or false — as the basis for their discussion of artificial intelligence. The conclusion to be drawn from Hilbert's perspective is as follows: The human cognitive process can be distilled into fundamental principles, which can be replicated through the utilisation of a mechanical apparatus. However, this approach was subsequently invalidated by Gödel's theorem. In 1931, Kurt Gödel published his 'incompleteness theorems', which demonstrated that Hilbert's system contained propositions that could not be formally decided. In this theorem, Gödel stated that "*a consistent system is incomplete, and the consistency of the axioms of this system cannot be proved within the system', and that there is no way to have a formal axiomatic system for all of mathematics.*"[8] The following four interpretations of Gödel's theorem on artificial intelligence are proposed: The following works are cited in the relevant literature: Lucas, Hofstadter, Pensore, Russell and Norvig.

Lucas posits that there will always be propositions that machines cannot comprehend or validate as true. However, human beings are aware of the veracity of these propositions. This attribute, therefore, serves to distinguish the human species from machines. Lucas commences his article 'Minds, Machines and Gödel' with the following words: "*The aforementioned theorems appear to provide compelling evidence that refutes the validity of Mechanism, thereby suggesting that the human mind cannot be adequately explained within the confines of a machine-based model.*"[9] Lucas posits that the possession of minds by machines is contingent upon their capacity to engage in all the intellectual activities that are characteristic of human beings. Despite the fact that machines have the capacity to perform calculations on formal strings in a manner analogous to that of humans, it is evident that the human population possesses a more extensive understanding of formal strings than machines. "*It is evident that human intelligence can derive a certain proposition of number theory that is true; however, the computer is blind to the truth of these propositions precisely because of Gödel's boomerang reasoning. This demonstrates that there are tasks that can be automated using computer programming, which are*

[8] M. Ali Çalışkan, "Matematikte Kesinlik Problemi", *Bülten.* (Istanbul: Bilim ve Sanat Vakfı Yayınları, 2012), 27

[9] J. R. Lucas, "Minds, Machines, and Gödel", Ed. A. R. Anderson, *Minds and Machines*, 43. transferring by Douglas R. Hofstadter, *Gödel, Escher, Bach: Bir Ebedi Gökçe Belik,* Trans. by. Ergün Akça ve Hamide Koyukan. (Istanbul: Pinhan Yayınları, 2011), 591.

analogous to human capabilities. Consequently, we have acquired a heightened level of cognitive ability."[10] Lucas posits that irrespective of the sophistication of the machines we construct, if a machine is to be considered, it must be commensurate with a formal string. It is evident that this string will contain an unprovable formula. This is a consequence of Gödel's theorem. It is evident that mechanical devices will be incapable of producing the formula in the correct manner.

This finding suggests that the algorithms of machines do not resemble the complex cognitive processes of human minds. In accordance with Gödel's theorem, which posits the limitation of machine intelligence, the human mind is regarded as the ultimate authority. It is posited that humans are not constrained by the same limitations. It is important to note that machines do not possess this particular advantage. The fact that we are outside the strings enables us to see formulae that are unprovable inside the strings. This demonstrates that the human mind works very differently from machine programmes.

Another objection is that of Professor Jefferson. Turing's position is that Professor Jefferson adopts a first-person perspective in his approach to the issue.[11] Turing's response does not constitute a satisfactory resolution to the issue, but rather serves to diminish its severity. Professor Jefferson's argument, which is indeed valid, asserts that the prerequisite for acknowledging the presence of cognitive faculties in machines is the capacity to produce poetic compositions and to be cognizant of the act of writing poetry.

Turing addresses the aforementioned objection, which is intertwined with various challenges, by asserting, in essence, that human capabilities are limited. It is evident that the human species is incapable of accomplishing every objective. It is conceivable that there exists a multitude of roles for which he is not suited. However, if the work is linked to the mind, and if a machine cannot perform the task even though a human can, then it cannot be concluded that machines have minds. It is this author's opinion that Lady Lovelace's objection constitutes the strongest argument to be taken seriously by artificial intelligenceists and the strongest argument they need to deal with. Lovelace's objection is that machines are incapable of acting independently. It is evident that the subjects in question adhere to the instructions provided to them, executing the designated tasks in the manner specified. In addressing this particular objection, Turing appears to operate under certain assumptions and seems to be anticipating a 'miracle'. Turing's hypothesis posits the eventual emergence of machines capable of spontaneous action, operating beyond the constraints of explicit instructions. The response proffered by Turing can be termed as 'let us wait and hope'.

[10] Douglas R. Hofstadter, *Gödel, Escher, Bach: Bir Ebedi Gökçe Belik,* 592

[11] For more information: Bernardo Gonçalves, "Can Machines Think? The Controversy That Led To The Turing Test", *AI and Society,* 38(6) 2023, 2499-2509.

Turing's response to the objection regarding continuity in the nervous system addressed the secondary issues, but did not fully address the primary concern. In response to this query, Turing posits that machines will invariably furnish responses that approximate veracity.

It is hypothesized that machines are incapable of replicating human brain cells. The complexity of the brain, and the absence of a comprehensive explanation for its function, are significant factors in this regard. Despite the development of computers capable of emulating a limited number of brain cells, it is my conviction that the creation of machines that can replicate an entire brain system remains unattainable.

The argument for the non-proposability of behaviour is summarised as follows. It is evident that individuals adhere to traffic regulations, such as stopping at red lights on motorways and utilising green lights for crossing. This is due to the fact that the red light is representative of 'danger' and the green light is representative of 'safety'. In the event of both red and green lights being illuminated simultaneously, what course of action would an individual take? In such cases, it is not possible to formulate a universal principle that can predict the actions of individuals. In such circumstances, individuals may opt to cross the road, while others may choose to stop. In the absence of established guidelines governing conduct in such circumstances, the capacity of machines to respond appropriately is precluded. In the event that machines are to be programmed for such eventualities, a distinction will emerge between machines and the human 'mind'.

The machine 'mind' will act in accordance with certain rules in such cases, but since human beings do not act in accordance with rules, there will be a difference between human and machine 'minds'. In response to the aforementioned argument, Turing offers the following counterargument: The assertion that it is impossible to establish rules for the human mind in such situations is not supported by conclusive evidence. It is my conviction that proponents of artificial intelligence should consider this argument with the utmost seriousness and reach an understanding with the thesis that the human mind does not function mechanically in challenging circumstances.

It is of considerable significance that Turing took the argument of extrasensory perception seriously. It appears that Turing subscribed to the notion of the existence of a phenomenon termed 'telepathy'. The perception of extrasensory perception is generally achieved through the knowledge-acquiring activity termed intuition. In the annals of philosophical discourse, there have been thinkers who have posited that intuition constitutes a wellspring of knowledge. One may cite Bergson, a prominent figure in the field of modern philosophy, as a pertinent exemplar.

2. Challenges And Failures Faced By Those Who Advocate The Possibility Of Artificial Intelligence

The discourse on artificial intelligence was significantly influenced by the socio-political climate of the Cold War era, as evidenced by the relevant studies in this field. The question of whether the Western or Eastern bloc countries were attempting to achieve greater unification of the machines within this framework remains a subject of debate. The bloc that produced more effective machines was gaining superiority over the other.

During the 1950s, experts in the field of artificial intelligence were making significant promises regarding the potential of the discipline. For instance, Herbert Simon proposed[12] that computers would undergo three distinct phases by 1968. The following stages are delineated herewith: 1. It is anticipated that the computer programme will be capable of achieving victory in a chess tournament. 2. The computer programme is designed to discover new mathematical theorems. 3. It is hypothesised that a number of psychological theories will be converted into computer programmes. Despite the passage of approximately five decades since these claims were initially made, computer programmes have yet to successfully complete the initial stage. It is this author's opinion that the other two stages are improbable candidates for surpassing in the coming centuries.

2.1. John Searle's "Chinese Room Experiment"

The most effective challenge to the thesis of strong artificial intelligence was presented by John Searle. However, it should be noted that J. Searle did not oppose the weak intelligence thesis. Searle's argument posits that proponents of strong AI are replicating the error committed by the advocates of Cartesian dualism. Defending the strong AI thesis is tantamount to accepting the dualist thesis. Machines are composed of physical structures; therefore, it is impossible for a physical entity to possess a mind. According to Searle, the brain is the origin of the mind. "*As a consequence of the robust perspective on artificial intelligence, the supposition is made that there is an absence of any elements that can be considered as inherently biological in the human mind.*"[13] The human mind cannot be reduced to a physical structure. Searle's thesis constitutes the foundational principle of non-reductionist materialism.

In order to demonstrate the impossibility of machines thinking, Searle designed and conducted a renowned experiment, which came to be known as the 'Chinese room experiment'. The experiment is to be conducted in the following manner:

It is evident that certain programmes have been developed which facilitate the use of a computer called 'X' to respond to questions in Chinese. It is evident that the quality of the

[12] For more information: Herbert A. Simon, *The Sciences of the Artificial*, (Massachusetts: The MIT Press, 1996).

[13] John Searle, "Bilgisayarlar Düşünebilir Mi?", *Cogito,* (13) 1998, 57-58.

responses provided is on par with those proffered by native Chinese speakers. In this case, it is pertinent to consider whether computers can be said to think like native Chinese speakers. Searle's response is negative. According to Searle, the predicament of the computer known as 'x' is analogous to that of an individual who, despite being unable to communicate in Chinese, adheres to instructions given in English within a setting replete with Chinese signage. In the room marked with Chinese signs, a non-Chinese speaker is presented with questions in Chinese, and the person in the room is given the following instructions: The large curve sign from basket 1 should then be placed adjacent to the small curve sign from basket 2. Consequently, the action of the individual in the room establishes a connection between the room and the Chinese-speaking individuals outside the room. The individual in the room is unaware of this fact, but the Chinese symbols that have been introduced into the room represent the questions, and the actions that the individual performs in accordance with the instructions represent the answers. In this case, although there is Chinese contact between the room and the people outside the room, the question remains as to whether the person in the room, who does not speak a word of Chinese, will be able to comprehend Chinese. The response to this question is negative. "*Searle's Chinese Room Experiment posits the hypothesis that a computer is incapable of facilitating human comprehension of Chinese language, akin to the inability of computer software to achieve this outcome.*"[14] The experiment described by Searle is, in essence, a response to Turing. The computer known as 'X' has the capacity to pass the Turing test, provided it lacks any understanding of the subject matter. This is analogous to a person who does not comprehend Chinese in the Chinese Room passing the Chinese Room test. However, this does not imply that computers possess thought or consciousness.

A plethora of arguments have been posited against the Searle Chinese room experiment.[15] It is my contention that the individuals who raise these objections are either not cognizant of or unwilling to comprehend the essence of Searle's argument. Searle's response to these objections involves the application of a single, varied response.[16] Searle presents three arguments that are used to refute the strong AI thesis, and these arguments are drawn from the Chinese room experience. Firstly, syntax is insufficient for semantics. Secondly, computers only possess syntactic structures. Thirdly, the mind has semantic content. And fourthly, the brain is the causative agent of the mind. According to Searle, the attribution of the mind to a machine is contingent upon the possession of a programme that exhibits equivalent potency and functionality to that of the human mind. "*The assertion is made that if the machine in question is indeed a computer, then its operations*

[14] Kamuran Gödelek, *Zihin Felsefesi*, 122.

[15] For more information: Robert James Wood, *Against the Chinese Room Argument*. (Halifax: Saint Mary's University, 2008).

[16] For more information about the arguments put forward against Searle and Searle's responses to these arguments, John Searle, *Akıllar, Beyinler ve Bilim*, Trans. by. Kemal Bek. (Istanbul: Say Yayınları, 2005), 42-44; Kamuran Gödelek, *Zihin Felsefesi*, 122-124.

must necessarily be of a syntactic nature. However, it is posited that phenomena such as consciousness, thinking, sensing, feeling, affecting, and so on, which are all of a considerably more complex nature, are things that go far beyond syntax."[17] Searle's thesis, positing the notion that computer programmes possess solely syntactic content, whereas humans possess both syntax and meaning, constitutes the most robust argument advanced against proponents of strong artificial intelligence. Furthermore, Searle articulated the distinction between human compliance with rules, and computer compliance with rules. It is his conviction that the operation of computers is contingent on the adherence to prescribed formal rules; the programme determines the sequence of actions to be undertaken. Furthermore, he emphasises that machines and humans differ in terms of their structural composition. "*It has been demonstrated that humans are capable of swiftly and accurately identifying the faces of their relatives. The machine performs a numerical operation to fulfil this process. The central question guiding this study is whether humans employ a numerical process to recognise their relatives.*"[18] Searle contests the assertion that machines capable of imitating the human brain are in error, or, as he terms it, 'delusional'. It is the contention of the aforementioned author that proponents of strong artificial intelligence are remiss in their consideration of the intricate architecture of the brain, instead assuming an overly simplistic perspective which equates the brain with mere 'information processing'.

Conclusion

In the present article, an analysis is provided of how Turing, who is perhaps one of the first proponents of the strong artificial intelligence thesis (given his awareness of the shortcomings of his own thesis), expressed nine arguments against his thesis in his own article and examined his answers to them. Subsequently, an examination was conducted of the trajectory of artificial intelligence discourse, the evolution of the field, and the challenges and setbacks experienced during its development.

The development of theories pertaining to the existence of artificial intelligence is predicated on human curiosity. Since time immemorial, humankind has been driven by the impulse to emulate the natural world in its own creations. It is evident that this curiosity has played a significant role in the course of human history, yielding notable advancements and accomplishments. This curiosity has led to the emergence of a new field of experience, and this field of experience has led to the emergence of technology. It is this author's opinion that the advent of strong artificial intelligence theses can be attributed to the rapid advancement and development of technology during the twentieth century. This was particularly evident at the conclusion of World War II, when the trajectory of the war had a significant impact on the advancement of heavy industry, surpassing the levels observed

[17] John Searle, *Akıllar, Beyinler ve Bilim*, 45.
[18] John Searle, *Akıllar, Beyinler ve Bilim*, 66.

in previous years. In the period following the Second World War, during the era of the Cold War, there was a notable increase in the prioritisation of artificial intelligence studies by both Western and Eastern bloc countries. Consequently, a significant financial investment was directed towards supporting artificial intelligence research and studies. The prospect of strong artificial intelligence, that is, the theoretical possibility of machines that possess human-like cognitive capabilities, began to be advocated. The theses of scientists who subscribe to this perspective are rife with internal inconsistencies. These issues have been articulated by philosophers such as John Searle.

The emergence of strong artificial intelligence theses can also be attributed to developments in the modern period. During a period of historical development characterised by a denial of the metaphysical dimension of the human condition, the articulation of these theses was facilitated by advances in technology. I would like to conclude my article with the ideas expressed by Douglas R. Hofstadter (Gödel, Escher, Bach: Bir Ebedi Gökçe Belik). His theses on the subject can be summarised as follows. Whether a computer programme can produce beautiful music is a complex question. The answer is no, and this will not happen in the immediate future. Whether emotions can be explicitly programmed into a machine is a fascinating question. This is not the case. This assertion is wholly unsubstantiated. Whether strong AI programmes will become 'superintelligent' is another complex question. Similarly, the question of whether strong AI programmes and humans will be identical is complex. It is reasonable to hypothesise that the differences between sophisticated AI programmes and most humans will be greater than the differences between most humans themselves.

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