

An Analysis of the Mechanistic Concept of the Universe

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Abstract: In this study, examinations will be made on the nature of the mechanistic universe conception. The mechanistic conception of the universe has created serious effects in all areas of life by giving direction to western ways of thinking. Copernicus' heliocentric system, Galileo's mathematical method, Bacon's scientific methodology, Descartes' search for certainty and philosophical expressions by distinguishing matter- spirit, and Newton's deterministic machine understanding shaped mechanistic understanding. The mechanistic vision, which argues that complex wholes can be understood by reducing them to basic building blocks, has become the method of science for centuries. The mechanistic understanding has brought along many problems when it is tried to be applied to social and human sciences as well as natural sciences. Considering the impact of the mechanistic universe conception, which plays a decisive role in many fields and brings along many problems, the necessity of the examination is clearly seen. The main emphasis of the study is on the idea that the mechanistic understanding of the universe is incompatible with the functioning of the universe. It is suggested that turning towards the universe with a view that is more compatible with the nature of things and the functioning of the universe is quite significant in terms of eliminating problems.

Keywords: Mechanism, machine, science, matter, spirit.



Introduction

In this study, firstly, the meaning of the mechanistic conception of the universe will be introduced. In this respect, it will be shown that this conception conflicts with the understanding of the universe as a living organism and this causes negative effects on the whole organism. Any view that accepts the universe as a mechanistic structure leads to negative consequences for the understanding of the universe as a complex organism. It is seen that these negativities influence all the structures within the universe. In my opinion, the mechanistic conception of the universe, which was formed during the development of Western thought, is not compatible with the nature of things. Therefore, in this study, the negativities caused by the mechanistic conception of the universe are identified and discussed from a critical point of view. The mechanistic conception of the universe, which dominates every aspect of life from economy to health, from biological processes to psychological data, creates an unhealthy and problem-producing structure as it operates on a ground that is not suitable for the nature of human beings and other living things.

The mechanistic conception of the universe, which has exerted a strong influence on all sciences for centuries, forms the basis of the modern western way of thinking. The mechanistic conception of the universe leads to dramatic changes in the way people understand and design the world. This new mentality, which progresses in direct proportion to science and technological developments, plays a decisive role in the formation of the dominant worldview in western thought.

In traditional thought, everything in the universe is in order, and everything is in a state of mutual interaction. The universe is a series of intertwined spheres, and the earth is the center of the universe (Aristoteles, 2019, p. 393). The worldview that prevailed in the west before the sixteenth century is purely organic. People live in small and harmonious communities, where material and spiritual events are based on mutual assistance, the needs of individuals are subject to the needs of society, and they experience nature based on organic relationships. The scientific framework of this organic worldview is based on the authority of Aristotle and the Church. Medieval science, which is a synthesis of Christian theology and morality with Aristotle's comprehensive system of



nature, has a completely different structure from contemporary science. This organic science, which remained unquestioned throughout the Middle Ages, is based on both reason and faith. Its main purpose is to fully understand the meaning and value of objects, rather than foresight and control. Medieval scientists, who adopted the organic view as a basis, examined the underlying purposes of natural events and dealt with the superior values of God, the human spirit, and morality. In the sixteenth and seventeenth centuries, radical changes occurred in this system of thought that was dominant in the Middle Ages. The understanding of the universe, which is organic, spiritual, and alive, has left its place to the understanding of the universe in the form of a machine. The world machine has become the dominant metaphor of the modern age (Capra, 2014, p. 61-62).

In the modern era, science has been given more importance than religion as a source of inspiration for thinkers. The introduction of the modern philosophy game, based on the mechanistic world picture, started with a rebellion against Aristotle. Aristotle's authority, which has been accepted as an infallible authority in all fields of science for centuries, has become a hindrance rather than a support as the human mind develops. All parties united against their common goal, Aristotle, and started to argue that the only way to truth is the way of experimentation. A new system was established with pure reason, and this system overcame the previous authorities. Discoveries of the laws of nature have led to the emergence of a new idea of external reality independent of human desires. The discovery of Copernicus, who researched and found mathematical unity in the sky with his heliocentric system, affected the imagination of human beings to a huge extent and changed their thoughts and goals. Earth is no longer the center of the universe, it is just one of the few planets orbiting an insignificant star at the edge of the galaxy. A person who realizes that he is no longer the master of a small and limited world is no more than a grain of dust drifting in the infinite universe. However, this humiliation brought with it a great exaltation. The human being, a small creature, is now able to name the stars and locate stars. The heliocentric hypothesis destroyed the boundaries of the world and made human beings equal to God. In fact, when man was the main figure in God's crea-



tion, he now occupies his glorious position. The history of the past, the science of today, and the science of the future are transformed by this new hypothesis and all values are reversed (Smith, 2021, p. 171-172).

According to his mechanistic understanding, which causes radical changes in the way of understanding and designing the world by reversing all values, the universe is a self-enclosed system defined like a machine. According to this understanding of the universe, the relationship between the parts of the machine has been determined for once, and the machine continues to function according to laws that nothing can break. This universe, which is highly tuned, whose every process is irrevocably necessary, simple, and regular, is set up once like a clock, and it always goes on like that. It does not have an intelligent power that directs the processes and a purpose that it strives to develop. The cause of the events occurring in the universe is the previous events in space and time, rather than a goal to be achieved in the future. This universe is a causal universe. The mechanistic universe continues to function in accordance with its own laws, independent of human knowledge and thoughts. This understanding of the universe, which has no place for purposes, feelings, values, and sanctity, is directly opposite to the ecological universe understanding (Ünder, 1996, ss. 51-52).

The mechanistic understanding of the universe, which emerged as a new paradigm, is individualistic because of the assumption that the whole consists of parts, the whole consists of the sum of parts, and the parts can be considered separately from the whole. It is analytical in that it assumes that the complex whole can be decomposed into its parts and its constituent atoms. It is also reductionist in that it assumes that the complex whole can be understood through the actions of simple and lower-level elements. The understanding of knowledge of the mechanistic approach is utilitarian or pragmatist. Knowledge is seen as a tool to control events and dominate nature (Can, 2020, s. 185). Scientific research is pursued not because it is valuable in itself, but to achieve useful results. Knowing is foreseeing and foreseeing is controlling. For modern scientific thought, control has become an end. In addition, the mechanistic view, which is scientific and technocentric, believes that everything related to reality can be known and explained by scientific methods. According to this



view, every problem faced by humanity can be solved with the cooperation of science and technology (Ünder, 1996, s. 55). Copernicus, Galileo, Bacon, Descartes, and Newton's thoughts are based on the mechanistic universe understanding, which has strong influence on western thought and places science based on everything. For the mechanistic universe concept to be fully understood, the thoughts of the names who were influential on this understanding should be revealed.

Copernicus took the first step in the transition to modern thought. According to Copernicus, the center of the universe is the sun. The Earth, like other planets and traveling stars, completes its annual cycle by forming a large circle around the sun (Copernicus, 2010, s. 45). Copernicus' heliocentric system caused radical destruction in traditional thought. With Copernicus' system that puts the sun at the center of the universe, man lost his central position in connection with the heavens. All human activities are directed towards the world, stuck to the world, and limited to the world. The sky has left its place to endless space and the sky has begun to lose its spiritual value (Kutluer, 1985, s. 33). Galileo observed celestial events by examining space with his telescope. Thus, he discredited the old understanding of the universe without any doubt and ensured the adoption of the Copernican theory as a valid scientific theory. Galileo used mathematical language to formulate the laws of nature he had discovered. The experimental approach pioneered by Galileo and the expression of nature in a mathematical language became the dominant feature of science in the seventeenth century and later (Capra, 2014, s. 63). Galileo's statement that "everything that cannot be measured and quantified is outside of science" has turned into the idea that "everything that cannot be quantified is unreal" in the post-Galileo period. This situation has caused a deep deviation from the understanding of nature, which is alive and always in transformation. This has led to the emergence of a science that is purified from sight, hearing, smell, aesthetic and moral sensitivity (Capra, 1996, s. 152). Galileo's thought that ignores sound, touch, fear, value, ethics, and quality has presented us with a dead picture of the world (Capra, 2000, s. 19). Along with Bacon's thoughts, the nature and purpose of scientific research have changed. The goal of science since ancient times has been wisdom, understanding the natural balance, and



living in harmony with nature. Science studies imitating the glory of God or the order of nature and flowing in the natural harmony of nature. However, by the seventeenth century, this attitude changes from integrative to demonstrative activity. Since Bacon, the purpose of science has been to use knowledge to dominate and control nature (Capra, 2014, s. 64). The goal is to learn about the causes and unknown aspects of what is happening and to expand the limits of human sovereignty to be able to intervene in everything that exists (Bacon, 2011, s. 75). Human being's knowledge and human power have the same meaning. Knowledge is power for Bacon (Bacon, 2022, s. 49). According to him, the practical use of knowledge is the most important measure of the value of knowledge. Bacon thinks that the human being was created by God in order to understand, interpret and dominate nature. Thus, through science, the modern human being asserts its superiority over ancient thought (Tarnas, 2012, s. 78).

Copernicus, Galileo, Bacon, Descartes, and Newton began to look at nature and motion from a different perspective than Aristotle. Especially the ideas put forward by Descartes and Newton created great destruction in the Aristotelian motion paradigm. The fundamental problems and techniques of ordinary science have undergone great changes. Descartes, who thought that it was very strange to cherish the old paradigm, decided to completely erase the old from the mind, saying that the old knowledge was not reliable. Starting from this, he put all thought to a rigorous test, using a systematic method of doubt, and rejected everything that contained doubt until a proposition that could not be doubted was reached (Erdoğan, 2009, p. 198-200). The ultimate goal is to rule the mind in such a way that it makes sound and correct judgments on everything that comes its way (Descartes, 2021, s. 29). Descartes rethinks the relationship between the new science and new nature design and all dimensions of culture and tries to create an acceptable rational and holistic framework. He thinks that mathematics should be used to obtain the well-founded knowledge he wants to create. Descartes is of the opinion that balance and certainty can be achieved between sciences when mathematics is used as a method. Adapting mathematics to the mechanistic physics model, Descartes asked how in every field and determined a method that



never leaves room for the dark and hidden in it, but accepts only the clear and distinct (Bumin, 1996, s. 42). This method of Descartes, which is trying to explain his philosophy with the geometric method, is called Cartesian. This method is the product of the idea of associating philosophy with science, like Bacon's inductive method and Galileo's deductive method (Aydn, 2002, s. 133). Descartes is based on the analytical method. This method simplifies the problems and makes it necessary to segment as much as possible by sorting (Descartes, 2021, s. 92). Descartes changed the face of natural sciences with his analytical, reductionist, clear, and distinct understanding of knowledge. Descartes, who prepared the way for Newton, wanted to deduce the nature of the whole universe from the nature of God, with an unbreakable chain of reasoning, in which each step depends on the previous one. He explained everything mathematically in terms of arrangement or number (Scruton, 2015, s. 51). He presented a divided world picture by distinguishing primary and secondary qualities in the universe he explained with mathematical expressions. Qualities such as number, shape, size, and motion, which cannot be separated from objects and expressed in mathematical language, are the primary, that is, the real qualities of nature. Qualities such as sound, smell, color, taste, and temperature are specific to the person who perceives them, and they are the only qualities that people attribute to nature. This distinction between primary and secondary qualities is people's perception of the world. He makes a clear distinction between the visible world and the real world. It reduces people's perceptions of the world to an illusion. In addition, the distinction between primary and secondary qualities forms the basis of the subject-object distinction that entered modern philosophy with Descartes. With this distinction, nature is seen as completely free of subjectivity, that is, human characteristics (Ünder, 1996, s. 39).

The claim of modernity has led to the systematic dissolution of the bond that traditional thought tried to create between nature and reason. In the modern age, this link has been replaced by a dualism that is never closed between the mind and the outside world. This dualism is between soul and body in Descartes' thought, between perceiving senses and perceived world in Locke's thought, and between mind and external reality



in Kant's thought. This understanding has given the mind dominance over nature (Bookchin, 2019, s. 109). Descartes built his entire view of nature on the thinking mind and space-occupying matter, which are unrelated to each other. Matter and spirit have completely different properties and have no contact with each other (Can, 2022, s. 21). It gave completely separate functions to the soul, such as thinking, and taking up space for the matter. According to him, spirit and matter are so separate that neither influences the other in the least (Erdoğan, 2009, p. 203-204). According to Descartes' mechanical principles, which extend to the whole universe and determine all formations, all changes in matter depend on the movement of its parts. The many states of matter, which are divided, move according to parts, and are influenced by part movement, are related to all changes in matter, which we only know by their spatiality (Descartes, 1967, s. 90). For Descartes, the fact that nature is a mechanism does not concern the soul, while the way in which thinkers conceived nature was determined by the attitude towards religion. Descartes does not reduce spirit and matter to each other in his dualist ontology. Descartes, with his metaphysics, which is defined as two types of beings obeying completely different laws, thinks that the laws that have no purpose in nature cannot teach the soul anything about its own virtues and God (Bumin, 1996, s. 36). Descartes says that beings have no intrinsic value, subjecting everything to pure mechanical analysis, which is finite, devoid of any purpose. He accepts *res cogitans* as the basis of meaning and value. Considers the mind or spirit as the only valuable being by nature (Cahoone, 2001, s. 68).

Descartes' description of the body, taking into account the machine model, based on the idea that organs work in harmony and form living integrity independently of the soul, a new era called mechanism was opened (Duralı, 1993, s. 32). The dual understanding of Descartes, who associates modern science, modern philosophy and modern art with each other, caused the greatest philosophical tragedy in the history of humanity with the impenetrable wall he placed between the mental and the material. Descartes' seeing the material as a machine has been influential on contemporary science's bringing the material to the fore (Kutluer, 1985, s. 42). Descartes distinguishes between matter, which operates ac-



cording to mechanical principles and occupies space but cannot think, and spirit, which does not operate and does not occupy space but thinks, according to mechanical principles. This distinction has left all psychic qualities out of the material world and scraped every spiritual trace with a material surgical meticulousness. According to this distinction, everything other than the human spirit, including the human body, is matter and operates according to mechanical principles. The separation of matter and spirit from each other with such precise lines has made man a foreign element in nature and spirit in the body (Ünder, 1996, s. 42). Human has remained outside the real reality, that is nature. Its share has been an insignificant spectacle role in nature. Nature and the human being have been separated from each other with definite lines and turned into a mechanical structure (Ünder, 1996, s. 40). According to Descartes, a human is the only being in the universe that has both a soul and a body. Since non-human beings are devoid of souls, they operate according to mechanical laws (Descartes, 2010, s. 61). Descartes, influenced the emergence of a new conception of the universe by bringing a new understanding of matter, thus got rid of the old idea of the cosmos. With the thoughts of Descartes, there is no unity in the world anymore. The world is nothing more than a set of objects presented to scientific research (Touraina, 1995, s. 62). Collecting all natural phenomena within the framework of mechanical laws, Descartes built the conceptual framework of modern western science.

As the fruit of Descartes' dualism between mind and body, science has the capacity to obtain precise knowledge of the universe and to make man the master of nature. Descartes' science, which is based on the paradigmatic character of modern thought, is inseparable whole with his understanding of progress, reason, objectivity, analytical and analytical method, and mechanistic universe perception (Tarnas, 2012, s. 87).

Cartesian mechanics is based on external influence, that is, on collision. Impact stops a moving object while it moves a stationary object. The quantity of motion evident by the instantaneous impact always remains the same, and the motion set by God never decreases or increases. Thus, Descartes reduced formation to mechanics and revealed an understanding that was far from Aristotle's understanding of formation. Despite



Aristotle's understanding that there must be four reasons for a change to occur, Descartes adopted the effective cause as a single cause (Timuçin, 1999, p. 102-103). With the motion initiated by the active cause, the universe operates in a mechanical order like a machine. After saying that animals and plants work like machines, Descartes, who takes the human body into consideration, states that the human body is formed in a similar way in terms of both the external appearance of organs and the formation of organs and that it has a soulless structure that can be explained by mechanical processes in nature (Descartes, 2010, s. 49). According to Descartes, the living organism consists only of a more complex mechanism. Physiology is just a more complex physics or chemistry. Descartes says that all the functions he attributes to the body machine are the result of the readiness of organs, such as the readiness of the wheels of a clock or other automaton. He also thinks that the death of the body occurs not because the soul has left it, but because a part of the body machine cannot function by being destroyed. Descartes argues that the difference between a living body and a corpse is like the difference between a working clock and a broken clock (Fouillee, 2009, s. 44).

According to Descartes, the universe is not a living organism endowed with forms and moved by teleological goals. According to Descartes, when the presuppositions are left aside, the analytical mind will see that the universe consists of inorganic atomic materials. This self can be understood mechanistically by dismantling it in a reductive manner, grasping the motion and arrangement of the parts. This perspective identifies the laws of mechanics with the laws of nature. In Descartes' thought, the science of mechanics forms the basis of the philosophy that the physical universe can be studied fully and that the human being will benefit from it to achieve its goals (Tarnas, 2012, p. 84-85). Descartes, who had an important influence on modern western science with a mechanistic point of view, dealt a strong blow to the understanding that represents the unity of living and non-living, which was exalted in the Renaissance period. The living is separated from the inanimate within the framework of the understanding of the mechanistic universe, which is getting stronger and stronger. With the new understanding of the universe, the human being conceived as spiritual has started to confront all the existing ones outside



of himself. As a result of this, with Descartes, all objects and events, including the human body, were tried to be explained based on the laws of mechanics (Duralı, 1993, p. 32-33). Descartes, who, like Bacon, establishes a relationship between knowledge and power, sees scientific knowledge of nature as a tool to control and benefit from nature. Nature, for Descartes, is something to be possessed and possessed. According to him, nature refers to a great machine given to man to be shaped according to his own purposes (Ünder, 1996, s. 43). Confidence in the controllability of everything varies with Cartesian thinking, which is in line with the distinction between mind and body. Descartes' images of the outside world are like passive candles that can be easily shaped by machines. The idea about the machine accepts the narrow and instrumental understanding of nature, which belongs to the technological perspective, as well as the idea that everything is controllable. The features of the machine are adjusted according to the benefit of the producer. It is important to know how to operate the machine made for control, and this is the way to dominate it by having power (Plumwood, 2017, p. 149-150). Acting with the idea of nature given to himself, man sees mechanistic science as a tool that he can use in line with his wishes and starts to follow a scientific path in this direction.

The mechanistic understanding of science, which affects human thought and actions, has given up on investigating what each object is, its essence, and its authentic identity. With this understanding, diversity was reduced to the same species, and the differences that were seen as qualitative until then began to be seen quantitatively. While interpreting nature, the first mover is not sought for what is happening, and it is focused on revealing how events affect each other. The interaction of each event with other events was tried to be determined through observation and experiment. The data determined through observation and experiment were measured and expressed in numbers. Thus, the science that became experimental and poured into mathematical molds began to search for generally accepted laws of nature. These laws, on the other hand, are nothing but laws expressing the relations between events. According to these laws, every event stipulates another event to which it is related (Duralı, 1993, s. 33).



The Cartesian way of thinking, which explains everything with mechanical processes, has become something that Descartes never anticipated. While Descartes follows an absolutized mind and keeps belief aside, modern scientific thought disables the whole world of belief, revealing a desert of disbelief. Now, with a scientific thought that only trusts the mind, both the world and God have disappeared into a mechanical understanding. They have been replaced by reason and the mechanization of everything. Nature began to be seen as a struggle of machines. All this stems from the absolutization of common sense as pure rationality and the interpretation of nature as operating according to mechanical principles, as was first done by Descartes (Jaspers, 2005, s. 141). The claim to reduce quality to quantity has come to such a point that it is believed that there is no science in the real sense where it is impossible to measure and that there are no laws other than scientific laws that explain quantitative relations. Rene Guenon, who states that Descartes' mechanistic understanding of the universe is the beginning of this trend, states that despite the failure of Cartesian physics, the mechanistic trend has increased since then due to its attachment to a general scientific concept of knowledge. Scientific thought, which is dominated by the mechanistic understanding of the universe, wants to be applied even to the field of psychology, which does not measure up due to its nature. Guenon thinks that it is wrong to reduce quality to quantity and that all attempts to explain the mechanistic form to give legitimacy to the sciences fall short (Guenon, 2005, p. 133-134). In addition, philosophers who examine the philosophical roots of environmental problems hold the mechanistic understanding responsible for the cruel attitude of modern humans towards other living things. If, as Descartes argues, everything other than the human soul is devoid of divine qualities and essential value, if plants and animals are nothing but inanimate machines devoid of pleasure and pain, there is no reason why a human should not treat them as he wishes. This wrong attitude also makes it unnecessary to anesthetize animals when conducting experiments and tests on animals (Durali, 1993, s. 43).

Another name that was influential in the development of the mechanistic understanding of the universe, which was criticized by many philosophers, is Newton. Newton realized the idea of complete determi-



nism in modern science for the first time by explaining his mechanical system with the laws of motion. The idea of determinism, seen in astronomy and mechanics, spread from physics to other sciences, and even to the human sciences in the following centuries, and was understood as predicting psychological and social events. This has led to the establishment of the idea that determinism is dominant in human sciences as in inanimate nature. This can be called the extension of the idea of mechanics to the special sciences because of determinism and the universality of mechanical laws. This spread can be seen as the realization of Descartes' ideal of science. In addition, Newton's laws claimed that it is possible to explain nature without miracles and coincidence. Newton says that there is a determinism in the laws that dominate the natural order that will not leave any chance or miracle. This allowed the possibility of not mixing natural determinism with religious belief, as in Descartes, but separating it on the contrary (Ülken, 1969, p. 15-16). Newtonian mechanics, which provides reasons that everything in nature is subject to determinism, has allowed us to know all the trajectories it has followed in the past and the trajectories it will follow in the future, and the paths it will follow in space and time if the position and momentum of an object are known (Rosenberg, 2015, s. 184).

In Newtonian mechanics, each body remains in its state of rest or motion unless it is forced to change by a force imposed to it. In this view, mechanical motion continues its movement unless prevented by a force. These established mechanical laws form the deterministic structure of the functioning of the universe (Newton, 1998, p. 79). Newton establishes the system of mathematics and physics that will create a complete and precise view of the universe and then subjects everything to determinism. Thus, it proves that the functioning of the universe depends on laws and that these laws can be understood and expressed by people. Newton's laws begin to predict what will happen in the future. This has given many people who understand the new science the idea that they can control the universe with a sense of mastery like never before. The sense of mastery grew stronger as Newtonian mechanics was applied to the development of the machines that made the Industrial Revolution possible. Human being has become the master of nature not only in terms of theoretical



understanding but also in terms of the practical conditions of exploitation. All these have created apocalyptic results on traditional mindsets. It is now thought that tradition is an obstacle in the understanding of truth and that traditional truths are open to criticism and questionable (Magee, 2004, p. 68-69).

Newton's mechanistic universe view, which caused a great shock on traditional thought structures and overlapped with Cartesian philosophy, created an infinite number of absolutized fields in the realm of existence, which he envisioned as a huge machine. In Descartes, the human body is just a machine; In Newton, however, the universe itself was redefined as a huge machine built by God. The effects of this mechanistic and pluralistic idea have been widespread and profound. It has been tried to be applied to every field researched by social and natural sciences, from sociology to medicine, from politics to economics, and from physics to psychology (Bulaç, 1995, s. 210). Newton's work shaped the program of every theoretical physics researcher until the end of the nineteenth century. All physical events and phenomena are reduced to masses, which are dependent on and within the scope of Newton's laws of motion (Einstein, 2013, s. 129).

He designed the Newtonian universe, in which the entire cosmological order operates according to deterministic and mechanical absolute laws, as a clock in which God intervenes when it breaks down. When a human discovers the deterministic laws operating everywhere and the mechanical order of the universe, he discovers the laws of God. There is no place for the sacred and the spiritual in this profane and secular universe. God is perhaps nothing but a superior mind. This mechanistic view of the universe, isolated and rationalized from the immanent and transcendent dimension, has been substituted for the organic view of the universe (Bulaç, 1995, s. 211). The mechanized human being has become a creature of this world and has lost the sacred and accepted the secular. Earth, a reflection of heaven for the mechanized human being, was not seen as a virgin nature, but as an artificial world created by mechanized man to forget God and his inner reality. Losing its sacred sense, the human being is suffocated in impermanence and impermanence, and clinging to what it considers freedom, has become a slave to its own inferior



nature. The human being, who had accepted this mechanical order, took pride in claiming that by making himself a slave to the mechanical order, he wrote his own destiny. However, the human being suffocates in its own prison, while still yearning for the sacred (Nasr, 2013, s. 173).

The modern worldview, which has a deep determinism and reductionist attitude, has mechanized nature and separated people from nature. The mechanistic understanding of the universe, which puts spirit and matter, value and fact, God and nature against each other, opened a gap between human and nature and separated nature and spirit from each other like water and oil. As the universe was purged of human qualities and purpose, the soul, which contained the human qualities of man, remained outside this reality (Ünder, 1996, s. 52). Russell examines the situation of the human, who is thought to have such a soul, in the face of the mechanistic universe. Russell says that mechanistic science degrades man so that he can see the truth and exalts him in motion (Russell, 2003, s. 19). According to Russell, in the mechanistic universe, the human being is the product of causes for which there is no foresight about the consequences. This has led to the origin of the human being becoming nothing but the result of the random arrangement of atoms of hopes and fears, love and beliefs. Accordingly, it has been seen that no intensity of thought and emotion, no individual life can be had, and all aspirations and achievements of the human being will have to be buried under the rubble of a ruined universe (Ünder, 1996, s. 53). Although the mechanistic understanding of the universe does not require people to approach nature with an exploitative, destructive and arrogant attitude, it has not prevented such an attitude. With the mechanistic understanding of the universe implying the domination of nature, a suitable intellectual environment has been prepared for the continuation of the idea of domination over nature already found in western thought. For Bacon, a religious duty, and according to Descartes, when the idea of “dominating nature” is added to the idea of “dominating nature”, the idea of material progress and the profit motive-based capitalism, the attitude of modern Western man towards nature has become a colonial and self-interested attitude. In addition to the worldview that does not prohibit any damage to the natural balance by disrupting it, effective tools are also necessary to ensure



this balance. Science and technology based on it have presented these effective tools to people in the modern age (Ünder, 1996, s. 68). With the power obtained through science and technology, modernity has been evaluated as a deviation from the normal state of tradition and a change in mentality. Modernity has not remained as a deviation from tradition but has been positioned against tradition through the ideology of modernism, and the modern world has been produced in the form of an anti-tradition movement. Although the modern mentality initially showed itself as humanism, humanism shifted to rationalism, rationalism to mechanicalism, and mechanicalism to materialism. The fact that the modern west has become a materialist civilization means the declaration of the dominance of quantity (Öçal & Özyurt, 2013, p. 206-207).

The power gained with science and technology and the idea of gaining more has presented a world picture that is limited only to technical knowledge about natural phenomena, existentially discriminating, and where the real reality can be obtained with science. But the long-established certainties of mechanistic science, which culminated in Maxwell's work in the electromagnetic field, the discovery of radioactivity, Einstein's theory of relativity, and the formulation of quantum mechanics by Bohr, Heisenberg, and their colleagues, have radically cracked and collapsed. Thus, all the great postulates of the mechanistic conception of science, such as atoms, which are the building blocks of nature and thought to be too strong to explode, the rigid mechanistic causality of all phenomena, the possibility of objective observation of nature, time and space as independent absolutes, are turned upside down (Tarnas, 2012, s. 194). With the co-collapse of eighteenth-century philosophy and twentieth-century science, modern humans and the modern mind were freed from their absolutes but lost the solid foundation on which to stand, with unsettling consequences. These unsettling consequences led to the development of an attitude that critically approaches the history of philosophy and science through the works of thinkers such as Karl Popper, Thomas Kuhn, and Paul Feyerabend (Tarnas, 2012, s. 200). Popper emphasizes that science can never produce certain or even probable knowledge. By observing the universe only as an outsider, humans can make imaginary predictions about the structure and function of the uni-



verse (Popper, 2005, s. 103). Scientists who conduct experiments, observations, and scientific research put forward a series of assumptions. Popper states that it is a must that these assumptions put forward in science be repeatedly tested and constantly audited. According to this point of view, scientific theories will remain as assumptions until they are proven wrong. Therefore, no theory can be said to be correct. Even a well-established theory will lose its effect when a better one is developed. Since fundamental truths are relative, they must always be reinterpreted (Popper, 2005, s. 109). Drawing on Popper's ideas, it can be said that Einstein's theory against Newton's theory showed the deficiency of the Newtonian theory and led to dramatic changes in the dominant understanding of science. However, according to Popper, Einstein's theory will also lose its validity when a better theory is developed. With his critical understanding of science, Popper showed the fallacy of the mechanistic conception of the universe.

Kuhn, who approached the history of philosophy and science with a critical attitude, states that in all scientific studies, the possibilities of data collection, theorizing, and problem solving depend on the dominant paradigm of the time. Science makes progress by looking for ways to be confirmed by the dominant paradigm. Scientists' research depends on the same rules and criteria under a common paradigm. Adherence to the paradigm and consensus are prerequisites for the advancement of science. According to Kuhn, the dominant paradigm cannot be tested in any way. Science reinterprets data that contradicts the dominant paradigm in a way that supports the paradigm and ignores all data that it considers useless. That is, science avoids contradicting the current paradigm. Newtonian mechanics, which forms the basis of the mechanistic conception of the universe, reigned as the dominant paradigm until the twentieth century. Therefore, mechanistic science has forced scientific studies to remain within a mechanistic form by not accepting any information that is incompatible with Newton's unrivaled paradigm (Kuhn, 2018, p. 82-85).

Feyerabend, one of the prominent figures who developed a critical approach in the philosophy of science, states that it is quite wrong to stick to a single method. According to Feyerabend, it is clear that the idea of an immutable method or the theory of immutable rationality is



based on an infantile idea of the human and social environment. For him, there is only one principle that can be defended under all circumstances and at all stages of human development. This is the principle of 'anything goes' (Feyerabend, 1989, s. 33). The idea of fixed rules as the only valid scientific understanding leads to undesirable results. Based on Feyerabend's statements, it can be concluded that the mechanistic conception of the mechanistic universe, the idea of a machine-universe that operates with fixed methods and rules, is problematic.

For a long time, it was understood that Newtonian mechanics, which was thought to be able to explain all the phenomena seen in nature and was seen as indestructible facts, was incomplete and could only be applied to a limited number of phenomena. However, this does not mean that Newtonian mechanics is wrong and quantum theory is correct. Because all these models are approximate conceptions of reality and only cover certain phenomena (Capra, 1991, p. 59-60). To summarize, the Cartesian decomposition and the mechanistic understanding of the universe had both positive and negative effects. For example, although it has produced extraordinary achievements in the field of classical physics and technology, it has also caused the civilization we live in to take on a structure that is more contrary and distant to human beings (Capra, 1991, s. 30). With collapse of the mechanistic understanding of science, the modern mind and modern human being have been freed from the laws that are in no way indestructible, from the well-functioning mechanical processes and fundamental truths. The rooted certainties of mechanistic science have been replaced by relative reality, which can be constantly tried, tested, and interpreted through experimentation and observation.

Conclusion

The mechanistic conception of the universe forms the basis of modern western thinking and has prevailed for centuries as the dominant worldview. It spreads to all areas of life with the mechanical processes it has set out from the machine model. In the mechanistic understanding, in which the universe is defined as a closed system like a machine, everything works in conjunction with causal relations. According to the mechanistic mentality, which connects all events and processes with causal relations and therefore believes that all events are predictable, the universe is



set up like a clock and always works like that. Although the mechanistic understanding of the universe has achieved extraordinary achievements in many fields with scientific developments, has made people have a say in the universe, and has contributed to the idea of progress, it also brings with it many negativities. In the mechanistic conception of the universe, nature, plants, animals, and the human body are seen as machines. The universe, which has been transformed into a lifeless, emotionless and artificial structure, is made an object of domination by those who control the mechanism. Values, religion, feelings, and wishes are not included in the mechanistic conception, in which non-quantitative elements are completely excluded from science and ignored. This presents a soulless and lifeless world in which all processes are dominated by mechanical laws. Mechanistic science is reductionist, fragmented, rational, and utilitarian. The mechanistic imagination, which believes that processes can only be understood by separating them into parts, has moved away from seeing the universe as a whole by focusing only on parts. It has led to limited information on scientific disciplines. The mechanistic conception of the universe, reducing everything to mechanisms and using scientific research not because it is valuable, but to obtain useful results and power, has led to being the focus of many criticisms. With the statements, he put forward, the mechanistic universe conception, which became the dominant paradigm and influenced all sciences, brought with it many deadlocks and depressions. The mechanistic understanding, which not only determines the method of natural sciences but also affects social sciences, has been accepted as an infallible way to reach scientific truths. However, the fact that mechanistic imagination left many problems unsolved and the developments that emerged in the twentieth century showed us that reality is multidimensional and multi-dimensional. Knowledge of this multidimensional reality can also be obtained relatively in many different ways. Seeing and perceiving the whole system as just a machine is nothing but a lifeless, emotionless, one-sided, and narrow point of view. There is the whole next to the part, the cultural elements next to the mathematical facts, the spirit next to the matter, the object next to the subject, the woman and nature next to the man, and all these are important and valuable in their own right. Establishing superiority



and dominance by separating one from the other condemns us to a limited, incomplete, and suffocating world. In order not to be condemned to such a shallow world, it is necessary to be aware of the problem and act with this awareness. The problems it holds, and the critical attitude developed in the history of philosophy because of these problems have clearly shown that the mechanistic conception of the universe is not flawless. From Guenon to Nasr, Popper to Kuhn and Feyerabend, many thinkers have expressed that the mechanistic conception of the universe has many aspects open to criticism. Science has an innovative structure that is open to change and progress and that develops new insights. Interpreting science and the world by relying on absolute truths can lead to a series of inaccuracies. For this reason, it is necessary to recognize that one should not be fixated on a single method, that all realities are relative and falsifiable, and that everything in the universe is valuable in itself without leaving room for mechanization. It must be known that the mechanical thinking in which nature, plants, animals and even the human body function like machines, binary distinctions, equating knowledge with the acquisition of power, reducing everything to mathematical expressions and making it devoid of value and emotion is a faulty view. Such a perspective can bring about marginalization, conflicts, abuse of power, and problems in search of solutions. Because many currents of thought that appeared in the 20th century were put forward to solve such problems.

After all these statements, it can be seen that the mechanistic conception of the universe constantly generates problems and consciously prepares the universe for a bad end. The mechanistic view of the universe, which presents an outdated universe, leaves humanity facing irreversible problems. In my opinion, it is clear that to overcome these problems, it is necessary to reshape life in every aspect with an understanding of the nature of things. In the universe, which is not just a collection of small particles and basic building blocks disconnected from each other, as the mechanistic view of the universe suggests, all parts are interconnected through a complex network of relationships. Since the mechanistic view of the universe argues that everything works like a machine, it has made human beings, animals, and nature lifeless and emotionless. But the uni-



verse is a whole in which organic and living processes are involved. Everything within this whole is a crucial part of the structure and functions in terms of the whole. In this regard, the organismic understanding, which we think is more appropriate to the nature of human beings, things and the universe, can be considered as a way out for the solution of current problems.

References

- Aristoteles. (2019). *Metafizik* (Y. G. Sev, Çev.; 5. bs). Pinhan Yayıncılık.
- Aydın, A. (2002). *Düşünce Tarihi ve İnsan Doğası*. Alfa Basın Yayın.
- Bacon, F. (2011). *Yeni Atlantis* (C. Saraçoğlu, Çev.). BS Yayın Basım.
- Bacon, F. (2022). *Noum Organum* (T. Kabadayı, Çev.). Bilgesu Yayıncılık.
- Bookchin, M. (2019). *Özgürlüğün Ekolojisi* (M. K. Coşkun, Çev.). Sümer Yayıncılık.
- Bulaç, A. (1995). *Din ve Modernizm*. İz Yayıncılık.
- Bumin, T. (1996). *Tartışılan Modernlik: Descartes ve Spinoza*. Yapı Kredi Yayınları.
- Cahoone, L. (2001). *Modernliğin Çıkmazı* (A. Demirhan & E. Çatalbaş, Çev.). İnsan Yayınları.
- Can, M. (2020). Akıl, Birey ve Bireycilik Kavramlarının Aydınlanma Felsefesi Işığında Yeniden Yorumlanması. *FLSF (Felsefe ve Sosyal Bilimler Dergisi)*, 29, 181-200.
- Can, M. (2022). The Must of Being an Individual is Correct Usage of Reason and Creative Activity. *Kaygı. Uludağ Üniversitesi Fen-Edebiyat Fakültesi Felsefe Dergisi*, 21(1), 19-36.
- Capra, F. (1991). *Fiziğin Tao'su* (K. H. Ökten, Çev.). Arıtan Yayınevi.
- Capra, F. (1996). *Yeni Bir Düşünce* (M. Armağan, Çev.). İz Yayıncılık.
- Capra, F. (2000). *Yaşamın Örgüsü* (B. Kuryel, Çev.). Yapı Merkezi.
- Capra, F. (2014). *Batı Düşüncesinde Dönüm Noktası* (M. Armağan, Çev.). İnsan Yayınları.
- Copernicus, N. (2010). *Göksel Kürelerin Devinimleri Üzerine* (C. Çevik, Çev.). Türkiye İş Bankası Kültür Yayınları.



- Descartes, R. (1967). *Felsefenin İlkeleri* (M. Karasan, Çev.; 4. bs). Milli Eğitim Basımevi.
- Descartes, R. (2010). *Metot Üzerine Konuşma* (A. Altınöz, Çev.). Paradigma Yayıncılık.
- Descartes, R. (2021). *Aklın Yönetimi İçin Kurallar* (E. Sunar, Çev.). Say Yayınları.
- Duralı, T. (1993). *Canlılar Sorununa Giriş*. Remzi Kitapevi.
- Einstein, A. (2013). *Bilim ve Felsefe Yazıları* (N. Bozkurt, Çev.). Sentez Yayıncılık.
- Erdoğan, E. (2009). *Arisoteles'ten Newton'a Paradigmatik Bilim Tarihi*. Arkeoloji ve Sanat Yayınları.
- Feyerabend, P. K. (1989). *Yönteme Hayır* (A. İnam, Çev.). Ara Yayıncılık.
- Fouillee, A. (2009). *Descartes* (A. Altınörs, Çev.). Eflatun Yayınevi.
- Guenon, R. (2005). *Modern Dünyanın Bunalımı* (M. Kanık, Çev.). Hece Yayınları.
- Jaspers, K. (2005). *Descartes ve Felsefe* (A. Kanat, Çev.). İlyaz İzmir Yayınları.
- Kuhn, T. S. (2018). *Bilimsel Devrimlerin Yapısı* (N. Kuyaş, Çev.; 10. bs). Kırmızı Yayınları.
- Kutluer, İ. (1985). *Modern Bilimin Arka Planı*. İnsan Yayınları.
- Magee, B. (2004). *Felsefenin Öyküsü* (B. S. Şener, Çev.). Dost Kitapevi.
- Nasr, S. H. (2013). *Bilgi ve Kutsal*. İz Yayıncılık.
- Newton, İ. (1998). *Doğal Felsefenin Matematiksel İlkeleri* (A. Yardımlı, Çev.). İdea Yayınevi.
- Öçal, Ş., & Özyurt, C. (2013). *Modernizm ve Gelenekcilik Arasında Din*. Hece Yayınları.
- Plumwood, V. (2017). *Feminizm ve Doğaya Hükmetmek* (B. Ertür, Çev.). Metis Yayınları.
- Popper, K. R. (2005). *Bilimsel Araştırmanın Mantığı* (İ. Aka & İ. Turan, Çev.; 3. bs). Yapı Kredi Kültür Sanat Yayıncılık.
- Rosenberg, A. (2015). *Bilim Felsefesi* (İ. Yıldız, Çev.). Dipnot Yayınları.



- Russell, B. (2003). *Bilimin Toplum Üzerindeki Etkileri* (E. Esençay, Çev.). İlya Matbası.
- Scruton, R. (2015). *Modern Felsefenin Kısa Tarihi* (U. Özmakas & Ü. H. Yolsol, Çev.). Dipnot Yayınları.
- Smith, P. (2021). *Rönesans ve Reform Çağı* (S. Çağlayan, Çev.). Türkiye İş Bankası Kültür Yayınları.
- Tarnas, R. (2012). *Batı Düşüncesi Tarihi 2* (Y. Kaplan, Çev.; C. 1-2). Külliyyat Yayınları.
- Timuçin, A. (1999). *Descartes Felsefesine Giriş*. Bulut Yayınları.
- Touraina, A. (1995). *Modernliğin Eleştirisi* (H. Tufan, Çev.). Yapı Kredi Yayınları.
- Ülken, H. Z. (1969). *Bilim Felsefesi*. Ülken Yayınları.
- Ünder, H. (1996). *Çevre Felsefesi*. Doruk Yayıncılık.



Öz: Mekanistik evren tasavvuru Batılı düşünme tarzlarına yön vererek yaşamın bütün alanlarında ciddi etkiler yaratmıştır. Evreni bir makina gibi tanımlayarak kendi içine kapalı bir sistem olarak gören mekanistik anlayışta her şey bulunduğu mekanizma içinde nedensel ilişkilerle işlemektedir. Karmaşık bütünlerin temel yapı taşlarına indirgenerek anlaşılabilirliğini savunan mekanistik tasavvur, yüzyıllar boyunca bilimin yöntemi haline gelmiştir. Parçalı, çözümleyici, indirgemeci ve faydacı olan mekanistik bilim, evreni bir makine içine yerleştirilmiş nesneler yığını durumuna getirmiştir. Birbirinden kopuk, parçalı ve cansız bir sistem sunan mekanistik kavrayış doğa bilimlerinin yanı sıra sosyal ve beşeri bilimlere de uygulanmaya çalışıldığında pek çok sorunu beraberinde getirmiştir. Mekanistik evren tasavvurunun kavramsal çatısı fizik alanında yapılan değişimler ile inşa edilmiştir. Kopernik'in güneş merkezli sistemi, Galileo'nin matematiksel yöntemi, Bacon'ın bilimsel metodolojisi, Descartes'ın kesinlik arayışı ile madde ruh ayrımı yaparak ortaya koyduğu felsefi ifadeler ve Newton'ın determinist makina anlayışı mekanistik kavrayışı şekillendirmiştir. Bu çalışmada hayatın tüm alanlarına sirayet ederek anlayış biçimleri üzerinde çarpıcı değişimlere yol açan mekanistik evren tasavvurunun neliği üzerine incelemeler yapılacaktır. Ekonomik, siyasi, psikolojik, biyolojik, toplumsal ve kültürel pek çok alanda belirleyici rol oynayan ve birçok sorunu da beraberinde getiren mekanistik evren tasavvurunun etki alanı göz önünde bulundurulduğunda incelemenin gerekliliği net bir biçimde görülmektedir.

Anahtar Kelimeler: Mekanistik, makina, bilim, madde, ruh.

