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Ethical and Theological Problems Related to Artificial Intelligence

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Abstract

Artificial intelligence is defined as the totality of systems and programs that imitate human intelligence and can eventually surpass this intelligence over time. The rapid development of these technologies has raised various ethical debates such as moral responsibility, privacy, bias, respect for human rights, and social impacts. This study examines the technical infrastructure of artificial intelligence, the differences between weak and strong artificial intelligence, ethical issues, and theological dimensions in detail, providing a comprehensive perspective on the role of artificial intelligence in human life and the problems it brings. The historical development of artificial intelligence has been shaped by the contributions of various disciplines such as mathematical logic, cognitive science, philosophy, and engineering. From the ancient Greek philosophers to the present day, thoughts on artificial intelligence have raised deep philosophical questions such as human nature, consciousness, and responsibility. The algorithms developed by Alan Turing have contributed to the modern shaping of artificial intelligence and have put forward the first models to assess whether machines have human-like intelligence, such as the “Turing Test”. The study first analyzes the technical infrastructure of artificial intelligence in detail and discusses the current limits and potential of the technology through the distinction between weak and strong artificial intelligence. Weak artificial intelligence includes systems designed to perform specific tasks and do not exhibit general intelligence outside of those tasks, while strong artificial intelligence refers to systems with human-like general intelligence and flexible thinking capacity. Most of the widely used artificial intelligence applications today fall into the category of weak artificial intelligence. However, the development of strong artificial intelligence brings various ethical and theological consequences for humanity. The ethical issues of artificial intelligence include fundamental topics such as autonomy, responsibility, transparency, fairness, and privacy. The decision-making processes of autonomous systems raise serious ethical questions at the societal level. Especially autonomous weapons and artificial intelligence-managed justice systems raise concerns in terms of human rights and individual freedoms. In this context, the ethical framework of artificial intelligence has deep impacts on the future of humanity and human-machine interaction, not just limited to technological boundaries. From a theological perspective, the ability of artificial intelligence to imitate the human mind and creative processes raises deep theological issues such as the creativity of God, the place of human beings in the universe, and consciousness. The questions of whether artificial intelligence systems can gain consciousness and whether these conscious systems can have a spiritual status have led to new debates in theology and philosophy. The ethical principles of artificial intelligence are shaped around principles such as transparency, accountability, autonomy, human control, and data management. In conclusion, determining the ethical and theological principles that need to be considered in the development and application of artificial intelligence is critical for the future of humanity. A comprehensive examination of the ethical and theological dimensions of artificial intelligence technologies is necessary to understand and manage the social impacts of this technology. This study emphasizes the necessity of an interdisciplinary approach for the development of artificial intelligence in harmony with social values and for the benefit of humanity. The study provides an important theoretical framework for

future research by shedding light on the complex ethical and theological issues arising from the development and widespread use of artificial intelligence.

Keywords

Psychology of Religion, Artificial Intelligence, Machine Learning, Ethics, Theology

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Öz

Yapay zekâ, insan zekâsını taklit eden ve zamanla bu zekâyı aşabilen sistemler ve programlar bütünü olarak tanımlanmaktadır. Bu teknolojilerin hızlı gelişimi, ahlaki sorumluluk, gizlilik, önyargı, insan haklarına saygı ve toplumsal etkiler gibi pek çok etik tartışmayı gündeme getirmiştir. Bu çalışma, yapay zekânın teknik altyapısını, zayıf ve güçlü yapay zekâ arasındaki farkları, etik sorunları ve teolojik boyutları ayrıntılı bir şekilde ele alarak, yapay zekânın insan hayatındaki yerini ve getirdiği sorunları kapsamlı bir bakış açısıyla incelemektedir. Yapay zekânın tarihsel gelişimi, matematiksel mantık, bilişsel bilimler, felsefe ve mühendislik gibi çeşitli disiplinlerin katkılarıyla şekillenmiştir. Antik Yunan filozoflarından günümüze, yapay zekâ üzerine düşünceler, insan doğası, bilinç ve sorumluluk gibi derin felsefi soruları gündeme getirmiştir. Alan Turing'in geliştirdiği algoritmalar, yapay zekânın modern anlamda şekillenmesine katkı sağlamış ve "Turing Testi" gibi kavramlarla makinelerin insan benzeri zekâyâ sahip olup olmadığını değerlendirmek için ilk modelleri ortaya koymuştur. Çalışmada öncelikle, yapay zekânın teknik altyapısı detaylı bir biçimde analiz edilmekte; zayıf ve güçlü yapay zekâ ayrımı üzerinden teknolojinin mevcut sınırları ve potansiyeli tartışılmaktadır. Zayıf yapay zekâ, spesifik görevleri yerine getirmek üzere tasarlanmış ve bu görevler dışında genel bir zekâ sergilemeyen sistemleri içerirken; güçlü yapay zekâ, insan benzeri genel zekâ ve esnek düşünme kapasitesine sahip sistemleri ifade etmektedir. Günümüzde yaygın olarak kullanılan yapay zekâ uygulamalarının çoğu zayıf yapay zekâ kategorisindedir. Ancak, güçlü yapay zekânın gelişimi, insanlık için çeşitli etik ve teolojik sonuçları beraberinde getirmektedir. Yapay zekânın etik sorunları arasında özerklik, sorumluluk, şeffaflık, adalet ve mahremiyet gibi temel başlıklar bulunmaktadır. Otonom sistemlerin karar alma süreçleri, toplumsal düzeyde ciddi etik sorular doğurmaktadır. Özellikle otonom silahlar ve yapay zekâ tarafından yönetilen adalet sistemleri, insan hakları ve bireysel özgürlükler açısından endişelere neden olmaktadır. Bu bağlamda, yapay zekânın etik çerçevesi yalnızca teolojik sınırlarla sınırlı kalmayıp, insanlığın geleceği ve insan-makine etkileşimi üzerine derin etkiler bırakmaktadır. Teolojik boyutlar açısından, yapay zekânın insan zihnini ve yaratıcı süreçleri taklit etmesi, Tanrı'nın yaratıcılığı, insanın evrendeki yeri ve bilinç gibi derin teolojik meseleleri gündeme getirmektedir. Yapay zekâ sistemlerinin bilinç kazanıp kazanamayacağı ve bu bilinçli sistemlerin ruhsal bir statüye sahip olup olamayacağı soruları, teoloji ve felsefe alanında yeni tartışmalara yol açmaktadır. Yapay zekânın etik ilkeleri, şeffaflık, hesap verebilirlik, özerklik, insan denetimi ve veri yönetimi gibi prensipler etrafında şekillenmektedir. Sonuç olarak, yapay zekânın geliştirilmesi ve uygulanması sürecinde dikkat edilmesi gereken etik ve teolojik ilkelerin belirlenmesi, insanlığın geleceği açısından kritik bir öneme sahiptir. Yapay zekâ teknolojilerinin etik ve teolojik boyutlarının kapsamlı bir şekilde incelenmesi, bu teknolojinin toplumsal etkilerini anlamak ve yönetmek için gereklidir. Bu çalışmada, yapay zekânın toplumsal değerlerle uyumlu bir şekilde geliştirilmesi ve insanlığın faydasına kullanılması için disiplinler arası bir yaklaşımın gerekliliği vurgulanmaktadır. Çalışma, yapay zekânın gelişimi ve yaygınlaşmasıyla ortaya çıkan karmaşık etik ve teolojik meselelere ışık tutarak, gelecekteki araştırmalar için önemli bir teorik çerçeve sunmaktadır.

Anahtar Kelimeler

Din Psikolojisi, Yapay Zeka, Makine Öğrenmesi, Etik Teoloji

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Introduction

In the digital age, where technology is rapidly evolving, artificial intelligence has become one of today's most significant scientific and technological innovations. Efforts to develop systems that mimic or surpass human intelligence have advanced since the mid-twentieth century through the joint contributions of various disciplines, including computer engineering, neurology, philosophy, psychology, robotics, and linguistics. Initially limited to narrow applications designed solely to perform specific and constrained tasks, artificial intelligence has now evolved into a broad field of research aiming to develop systems capable of exhibiting human-like cognitive abilities and making independent decisions. The revolutionary changes that artificial intelligence brings to various sectors such as healthcare, education, finance, and law not only transcend technological boundaries but also raise important discussions on ethical, legal, and theological levels. The roots of artificial intelligence are based on a long historical process beginning with mathematical logic and cognitive sciences. The philosophical foundations, from Aristotle's laws of logic to Descartes' mind-body dualism, formed the theoretical basis of artificial intelligence. In the early 20th century, Alan Turing's algorithms and symbolic processing theories contributed to shaping artificial intelligence in its modern sense. The "Turing Test" envisioned by Turing was accepted as one of the first models for evaluating whether a machine possessed human-like intelligence. These developments demonstrate that artificial intelligence is not merely a technical field of study but also a multidisciplinary research subject that opens doors to philosophical questions about human nature, consciousness, morality, and responsibility. Artificial intelligence is divided into two fundamental categories: weak and strong artificial intelligence. While weak AI refers to systems designed to perform specific tasks and show high performance in narrow fields, strong AI refers to systems with human-like general intelligence and flexible thinking capacity. While the first category encompasses most of today's widely used AI applications, the second category remains primarily a theoretical research area. However, the question of what ethical and theological implications would arise if strong AI were developed remains central to research in this field. In this context, the social and ethical dimensions of artificial intelligence have become as important as technological development. The ethical problems of AI particularly focus on issues such as responsibility, autonomy, privacy, and bias. The decision-making processes of autonomous systems bring important ethical questions at both societal and individual levels. The ethical framework of AI extends beyond technological boundaries, leaving profound effects on humanity's future, human-machine interaction, and social structure. Additionally, with the development of AI technologies, theological discussions have gained importance. The existence of machines that mimic human minds and creative processes has raised deep theological issues such as God's power of creation, humanity's place in the universe, and consciousness. In particular, questions about whether AI systems can gain consciousness and whether these conscious systems can have spiritual status have sparked new debates in theology and philosophy. In this article, a literature review was employed to examine the ethical and theological problems related to artificial intelligence, and an interdisciplinary approach was adopted. The ethical and theological dimensions of artificial intelligence have been evaluated from philosophical, legal, and social science perspectives. A comprehensive examination of the

ethical and theological dimensions of artificial intelligence technology is vital for understanding and managing its societal impacts. In this context, our study aims to contribute to determining the ethical and theological principles necessary for developing artificial intelligence in harmony with social values and using it for the benefit of humanity. In studies on artificial intelligence ethics in the literature, the impacts of autonomous systems on society are particularly evaluated (Dignum, 2019, 44,102). In discussions regarding the theological dimensions of artificial intelligence, topics such as the possibility of AI gaining consciousness and its spiritual status are addressed (Bjork, 2008, 101; Descartes, 1999, 17-22). Compared to existing studies in the literature, the article emphasizes the necessity of an interdisciplinary approach by addressing the effects of artificial intelligence from a broader perspective.

1. Artificial Intelligence

Artificial intelligence (AI) is defined as a scientific field encompassing various disciplines such as computer engineering, neurology, philosophy, psychology, robotics, and linguistics, and includes computer software and robot designs that exhibit human intelligence-specific behaviors such as perception, reasoning, thinking, learning, comprehension, intuition, and design (Budak, 2005, 797). Its scope includes a wide range of areas, from playing chess to proving and making medical diagnoses. The main objectives of artificial intelligence research include developing computer programs capable of learning from experiences, solving problems, processing natural language, and interpreting visual data (Ertel - Mast, 2017, 1). In 1958, Alan Turing introduced a model known as the "Turing Test," which established the criteria for determining whether a machine could be considered intelligent. According to Turing, for a machine to be considered intelligent, it must possess the ability to mimic human behavior. Turing expects a machine to pass the Turing Test with capabilities in natural language communication, information storage and processing, query response, new inference making, sensory perception, and movement ability. Artificial intelligence also encompasses systems capable of logical thinking and inference. The purpose of these systems is to mimic or surpass human intelligence in rational decision-making and problem-solving processes. The fundamental principles of artificial intelligence are based on the basic laws of thought established by the ancient Greek philosopher Aristotle (Oguike, 2021, 2-4). However, although artificial intelligence is perceived as a copy of human intelligence, its working mechanisms differ significantly from human intelligence. AI systems possess higher processing speeds and broader storage capacity compared to human intelligence. The logical processes used by some advanced computer systems can be so complex that even experienced programmers cannot comprehend them. These systems have the ability to develop and use a unique language that can only be understood by other computers (Thomas, 2005, 40). The most significant advantage of artificial intelligence over human intelligence is its ability to perform extremely complex analyses within milliseconds and make rapid decisions. While the fastest nerves in the human brain can transmit impulses at approximately 90 meters per second, fiber optic connections can transmit these impulses at 300 million meters per second. While a human neuron fires in one-thousandth of a second, a computer's transistor can fire in less than one-billionth of a second. The knowledge source of artificial intelligence is large data sets known as "Big Data" (Iafrate, 2018, 6). This concept, referring to large and complex data sets that cannot be processed with traditional data

management methods, can be stored, processed, and analyzed to derive meaningful results. Big Data is an important technological development that enables dealing with diverse and complex data sets that affect corporate decision-making processes. Artificial intelligence systems demonstrate the ability to scan this vast data pool within milliseconds and make quick and effective decisions (Saxena et al., 2021, 3). In this context, artificial intelligence not only mimics human intelligence but also possesses capabilities that exceed human abilities in certain areas. This situation raises important questions in both technological and ethical contexts and creates a broad field of study for future research.

Artificial intelligence is divided into two main categories: weak (narrow) and strong (general). Weak artificial intelligence refers to systems designed to perform specific tasks and cannot exhibit general intelligence beyond these tasks. For example, they can show high performance in specific areas such as analyzing meteorological data or medical imaging; however, these capabilities cannot be applied to different domains (Yao et al., 2017, 23). Weak AI systems can improve their performance over time through methods such as deep learning. However, since they cannot function in entirely new areas, they are still considered weak AI. While these systems offer ideal solutions in practical applications, strong artificial intelligence is necessary for flexibility and the ability to handle unforeseen problems (Coppin, 2004, 6). Strong artificial intelligence (Artificial General Intelligence, AGI) refers to systems with human-like general intelligence and flexible thinking capacity across various fields. Strong AI not only performs programmed tasks but can also exhibit abilities such as consciousness, strategic thinking, logical inference, decision-making under uncertainty, and natural language communication (Chang, 2020, 299). Self-awareness, learning, collaboration, and the capacity to produce intelligent entities like itself are also among the characteristics of strong AI. To date, fully-fledged strong AI has not been developed; however, research in this field is advancing rapidly (Ekmekci - Arda, 2020, 21-22). Various tests have been proposed by researchers to evaluate the development of strong AI. One of the most well-known tests is the Turing Test. In this test, artificial intelligence and a human communicate in writing with an evaluator without revealing their identities, and the evaluator is expected to determine which is human and which is machine. Other tests include the Coffee Test proposed by Steve Wozniak, the Furniture Assembly Test involving the assembly of dismantled furniture, and the Kurzweil-Kapor Test developed by Ray Kurzweil and Mitch Kapor (Frana - Klein, 2021, 161; Taulli, 2019, 4). These tests are used to assess whether strong AI has reached human-like intelligence levels, and passing these tests in the future will initiate a new era in human-machine interaction.

Machine learning and deep learning are the fundamental mechanisms that enable artificial intelligence to evolve beyond programmed procedures into a dynamic cognitive system capable of autonomous learning and knowledge generation. Machine learning, a significant subfield of artificial intelligence, focuses on developing systems with data analytics and pattern recognition capabilities. This concept, introduced to literature by Arthur Lee Samuel in 1959, draws its epistemological foundations from mathematical disciplines such as statistics, probability theory, and optimization, allowing systems to optimize their decision-making processes by learning from examples (Suguna et al., 2021, 76). The primary goal of machine learning is to discover patterns and rules in data by adapting to continuously changing data streams. Working with

large datasets, it is used in various applications such as automating repetitive tasks, identifying patterns, and predicting future outcomes. Machine learning is applied across various sectors, including healthcare, finance, transportation, and education, enhancing artificial intelligence's capacity to adapt to real-world problems. The broad application area of this technology demonstrates artificial intelligence's central role in the modern technology ecosystem (Pickover, 2019, 203). Deep learning, on the other hand, is a specialized branch of machine learning that uses multi-layered artificial neural networks inspired by the biological structure of the human brain. This system, capable of automatic feature extraction from complex data structures and creating high-level abstractions, has a hierarchical structure consisting of an input layer, multiple hidden layers, and an output layer (Neapolitan - Jiang, 2018, 7; Say, 2018, 100). Deep learning systems are successfully applied in various areas such as computer vision, object recognition, natural language processing, machine translation, speech recognition, and synthesis. The system's most important advantage is its ability to automatically extract features from raw data and recognize complex patterns with high accuracy. However, it also faces significant challenges, such as the requirement for large amounts of labeled data, high computational costs, and difficulty in interpreting decisions due to its black-box nature (Iafrate, 2018, 35).

2. Ethical Problems Related to Artificial Intelligence

Ethics, derived from the Greek word "ethos" meaning custom, is a philosophical discipline that examines the values, moral norms, and behavioral rules in people's individual and social relationships, questions the concepts of "good" and "right", and investigates the principles of moral behavior (Cevizci, 2002, 3). Morality, another concept related to ethics, is the sum of moral behavioral rules, laws, and principles adopted by certain human communities in a particular period that regulate individuals' relationships with each other (Arslan, 2012, 17). Ethics and morality concepts are frequently used interchangeably in everyday discourse and express normative obligations and responsibilities that shape individuals' behaviors. However, in philosophical literature, these two concepts carry different epistemological and ontological meanings. While ethics encompasses the theoretical framework and systematic philosophical inquiry regarding right and wrong actions, morality examines the practical life manifestations of this theoretical foundation. In this context, while ethics exists on a principled plane, moral phenomena occur on a behavioral dimension. In other words, ethics deals with the normative value system, while morality addresses the reflections and applications of these values in daily life practice (Demirkasımoğlu, 2020, 3).

The surpassing of human capabilities by artificial intelligence and the development of autonomous humanoids have made the societal impacts of these technologies more prominent. For example, Saudi Arabia's granting citizenship to Robot Sophia indicates that states are taking the ethical status and legal responsibilities of robots more seriously. The development of artificial intelligence and robotic technologies has brought new ethical discussions to the forefront. Among the fundamental questions raised are whether artificial intelligence can have moral capacity, whether machines having the ability to think is desirable, and how this situation will affect human perception. Furthermore, ongoing debates revolve around the accountability of artificial intelligence systems, the ethical validity of autonomous weapons, and the

recognition of human rights for artificial entities. These questions are being addressed across different disciplines, including philosophy, law, ethics, engineering, and social sciences, and play a crucial role in shaping the social and legal framework of artificial intelligence and robotic technologies. In the literature and social sphere, the main topics most discussed in the context of AI ethics are responsibility, privacy, bias, and transparency. These elements are not limited to merely ensuring the protection of individuals' rights but also aim to support the production of social benefit by AI technologies and their sustainable development.

Responsibility is one of the most important topics of discussion regarding AI ethics. Similar to holding humans accountable for their actions, responsibility mechanisms need to be established for the behaviors of AI-enabled products. The first AI-related death occurred in 1981 at the Kawasaki heavy industry facility in Japan, where engineer Kenji Udhara lost his life due to a production robot not being shut down (Guardian, 16 January 2024). Similarly, an incident in 2021 at the Tesla Giga factory in the USA, where a robot attacked and injured an engineer, has brought security concerns about AI back to the forefront (Dailymail, 06 January 2024). AI safety risks become particularly important in systems that directly interact with the physical world, such as autonomous vehicles. "Trolley problem"-like ethical dilemmas have led to discussions about which moral rules should be followed in the decision-making processes of autonomous vehicles. For an autonomous vehicle to make a moral decision, it must be able to identify ethical situations, apply legal and moral principles, and make concrete decisions (Dignum, 2019, 44). Other areas where AI interacts also raise significant issues regarding moral responsibility. AI can easily access individuals' personal data and make various predictions based on this data, potentially leading to personal rights violations. Particularly, the lack of user consent in data collection processes creates trust issues and causes privacy violations. This situation is further deepened by companies like Google and Facebook using user data for commercial purposes (Suguna, 2021, 86). The question of who will be responsible for damages caused by AI is an issue that needs to be resolved both legally and ethically. While AI manufacturers can be held responsible for material and software errors, as AI systems develop independent learning and decision-making capabilities, proving this responsibility may become more difficult. Weak AI systems are thought to have no moral responsibility because these systems must behave as they are programmed. However, with the development of strong AI systems, these approaches need to be re-evaluated (Dignum, 2019, 99; Lee, 2020, 374). To develop the responsibility of AI systems, it is suggested to establish professional ethical rules for experts working in this field. However, considering the interdisciplinary nature of AI, creating and implementing these rules is a complex process. To address AI ethics and legal responsibility more comprehensively, experts from different disciplines, such as social scientists, philosophers, and legal experts, need to be included in AI development processes.

Privacy has become a significant topic of discussion in the context of AI ethics with the development of AI technologies. AI algorithms' access to individuals' personal data and unauthorized use of this data can lead to privacy violations. Particularly, machine learning systems' need for large datasets further increases privacy concerns. In addition to AI systems' data access capacity, their advanced pattern recognition capabilities create potential risks that could jeopardize individual privacy even without direct access. For example, modern facial

recognition systems can detect and track individuals unnoticed, threatening personal privacy in public spaces. Today's rapid development of digital technologies has made it more challenging to discern who has access to personal data and its usage. According to the Cyber Threat Status Report published by Defense Technologies Engineering and Trade Inc. (STM) in 2023, ChatGPT, an AI-based language model, was found to have leaked personal and financial information. The report stated that an outage in ChatGPT Plus, the paid version of ChatGPT, was caused by security vulnerabilities in the system, allowing users to access each other's chat histories and payment information (CNN, 25 July 2024). Furthermore, the Italian Data Protection Authority temporarily banned the application in 2023, stating that ChatGPT violated regulations in its user data collection and storage processes. Following this decision, the European Data Protection Board decided to establish a task force to examine ChatGPT. This step indicates the European Union's proactive approach to data security and personal data protection regarding AI technologies (Dünya, 24 July 2024; NTV, 24 July 2024). Privacy violations are not limited to individual data leaks; AI's potential to detect and influence mass behavior also raises the risk of this technology being used as a social control tool. In particular, China's social credit system stands out as an example where AI monitors and scores individuals' social and economic behaviors (Stahl, 2021, 24). Privacy protection technologies such as anonymization and encryption can be used as solutions against privacy violations. These technologies can contribute to protecting privacy by obscuring the identities of individuals or groups. However, such solutions require additional cost and effort.

Bias is another significant ethical issue concerning AI technologies. It is frequently reported that machine learning algorithms perpetuate problems such as gender-based discrimination in human resources processes or racial biases in audit mechanisms. If an algorithm is trained with biased datasets, it will inevitably reflect these biases in its decisions. In this context, the lack of transparency in AI systems' data analysis-based results leads to these systems being characterized as a kind of "black box." In these increasingly complex systems, understanding why a particular decision was made becomes difficult, and insufficient responsibility is taken to identify potential biases in training data (Stahl, 2021, 42). The issue of bias in artificial intelligence technology stems from the data sets and the design of the algorithms that underpin the system. Algorithms can reflect the societal and historical biases of their developers, leading to injustices against certain groups. For example, AI-based facial recognition systems tend to misidentify Afro-American and Latino individuals, which undermines the understanding of justice among individuals of different races (Akgun - Greenhow, 2022, 434). Additionally, when considering factors such as insurance type, race, or gender, some AI models have been found to produce unfair results for different patient groups (Karimian et al., 2022, 544). Comprehensive research conducted by the European Union Data Protection Commission and the United States Pew Research Center shows that current AI algorithms produce discrimination in data collection, classification, ranking, and interpretation processes regarding age, gender, and race (Li et al., 2021, 2-3).

Transparency is becoming an increasingly critical concept in the development and implementation processes of AI technologies. Transparency is addressed across a broad spectrum covering different components of AI systems. These components include data sources,

design methods, algorithmic structures, and the actors and stakeholders involved in these processes. It is of great importance that the factors affecting AI systems' decision-making processes are clearly understandable by all stakeholders who develop, use, regulate, and are affected by these systems. However, the inherently non-transparent nature of machine learning systems is a significant problem. These systems are generally protected by trade secrets, which further reduces the level of transparency. In particular, AI algorithms learn based on the data presented to them and make decisions with this data. In this process, algorithms may not question the accuracy of the data and may sometimes ignore incorrect or biased data (Dignum, 2019, 61). Such deficiencies in machine learning systems can be addressed through proper implementation of software engineering procedures in AI development processes. Continuous and open reporting of development processes can increase transparency by facilitating the analysis and re-evaluation, when necessary, of these systems' decision-making mechanisms. This approach will also contribute to strengthening trust in AI by providing clarity and control at every stage of learning and training processes. Transparency is not just about understanding how the system works but also requires knowledge about how external factors affecting the system can be controlled.

The reliable and humane development of artificial intelligence necessitates the integration of human values and ethical principles into technological development processes. This integration requires an interdisciplinary approach and a multi-layered evaluation process. The moral development of artificial intelligence requires a multidisciplinary approach that encompasses philosophical, sociological, and cultural dimensions rather than being merely a technical intervention. In this context, the integration of ethics education into artificial intelligence curriculum holds strategic importance. The inclusion of ethics education in artificial intelligence development processes can potentially make critical contributions in areas such as raising ethical awareness, developing an interdisciplinary perspective, strengthening social responsibility consciousness, ensuring compliance with ethical design principles, and developing cultural sensitivity.

3. Theological Problems Related to Artificial Intelligence

Rapid technological developments in artificial intelligence and robotics are redefining epistemological and ontological boundaries within the framework of human-machine interaction, bringing theological, philosophical, and ethical debates to the forefront. The development of human-like artificial intelligence challenges traditional concepts such as creation and humanity's relationship with God, while necessitating a theological evaluation of humanity's creative role. The integration of artificial limbs and implants shakes traditional religious understandings of the body-soul relationship, while issues such as marriage and sexuality with humanoid robots require a reexamination of moral and religious norms. Furthermore, the increasing consciousness and reasoning capacity of artificial intelligence raises the question of whether it can be considered a religiously responsible entity. This multi-layered transformation necessitates the reconstruction of the philosophical foundations of moral and legal responsibility. While technological developments redefine the existential parameters of humanity, they also test the flexibility and interpretative capacity of religious thought.

Today, artificial intelligence's increasingly complex structure and consciousness-like features have led to reinterpretations of the concept of God and discussions about technology's potential to assume religious functions. The development of digital technologies, especially alongside the secularization process in Western societies, has brought about the sanctification of science and technology. In this context, technology can assume the meaning, ritual, and community functions traditionally provided by religions, thus giving rise to new non-transcendent belief systems based on sensory experience. Virtual reality, artificial intelligence, and robotic technologies play important roles in the development of new belief systems such as “data-centrism” and “techno-humanism” (Chornomordenko et al., 2022, 136; John Rivers, 2006, 517). The fact that generative artificial intelligence possesses attributes traditionally ascribed to God, such as superior intelligence, unlimited knowledge, and creativity, can cause some users to perceive these systems as supreme beings. Technologies like the Internet of Things, with their all-knowing and omnipresent nature, have come to mimic God's omniscience (The Conversation, 2023). From the perspective of Christian theology, artificial intelligence's claim to represent God is an illusion. Humans, with their desire to establish dominion over a being they created, unconsciously substitute their own selves for God, which is considered a modern form of idolatry in Christian tradition (Gaudet et al., 2024, 136-139). Baloğlu (2022, 215), emphasizes that advanced technologies trigger humans' tendency to deify themselves, leading to ethical problems. Baloğlu argues that this tendency results in the monopolization of scientific knowledge and disregard for ethical boundaries, and advocates for establishing a “civilization of morality” and freeing humanity from being objects of digital technology.

From a theological perspective, human moral responsibility is built upon the concept of free will. Humans can be held accountable for their choices because they make these choices consciously and with free will. However, today's narrow artificial intelligence systems do not possess such free will. This raises a theological problem. If artificial intelligence can make rational decisions, but these decisions are based on programmed algorithms and predetermined datasets, can AI then be considered a moral agent? That is, from a theological perspective, it is debatable whether artificial intelligence, as a being without free will, can have moral responsibility (Nath - Sahu, 2020, 106). Furthermore, when operating solely with programmed algorithms without human-like free will, how these systems can assume moral responsibilities remains a question to be answered. While some theologians like Hubert Dreyfus, Yusuf el-Kardavi, and Joseph Ratzinger argue that artificial intelligence lacks these human-specific qualities, other thinkers like Noreen L Herzfeld, Anne Foerst, and William Clocksin suggest that with technological advancement, such qualities might one day be instilled in AI. However, such development would require a theological and philosophical reassessment of artificial intelligence (Graves, 2022, 186-188). In Abrahamic religions, God is the source of moral laws, and humans follow these laws to perform moral actions. However, the question of whether artificial intelligence can be subject to such divine law to make moral decisions remains unclear. Theologically, it is challenging to accept an unconscious and programmed entity that is not subject to God's moral order as a moral agent. In this context, how artificial intelligence relates to God's moral order emerges as a theological issue (Nath - Sahu, 2020, 107).

The transformation of human experience through technological advances highlights the limitations of traditional religions' understanding of human nature. Considering that human identity is shaped by interactions with its environment, the proliferation of computer technologies is increasingly transforming humans into cybernetic beings. The concept of cyborg, despite its origins in the 1920s, has become a metaphor for the blurring boundaries between humans and technology with the widespread use of computer technology. Cybernetic science gained significant momentum with Norbert Wiener's 1948 work "Cybernetics: or, Control and Communication in the Animal and the Machine" and brought together scientists from various disciplines including biology, engineering, and anthropology. This field has produced effective results in many areas, particularly artificial intelligence, psychology, and economics, through the study of neural networks and information processes. Cybernetics pioneers Norbert Wiener and Warren McCulloch argued that cybernetics could reinterpret religion and place it on a more rational foundation. According to them, cybernetics has the potential to bridge blind faith and technological thinking (Modern, 2021, 49,56). Abrahamic religions such as Islam, Christianity, and Judaism are facing challenges posed by cybernetic entities. These religions' teachings directed at physically embodied humans are becoming increasingly ambiguous as the brain begins to be perceived as a computer processor and the boundaries between mind and machines blur. In Christianity, it is believed that humans are created in God's image, and this creation gives humans characteristics such as reason, consciousness, free will, and moral responsibility. However, the idea that artificial intelligence can mimic human intelligence raises questions about whether humans are God's special creation (Nath - Sahu, 2020, 108). The question of whether artificial intelligence will replace humans in the future holds an important place in philosophical and religious discussions. While some thinkers like Yuval Noah Harari, Jacques Ellul, and Theodore Roszak claim that the development of artificial intelligence will deprive humans of being God's only intelligent creation, others like Ray Kurzweil, Timo Honkela, and Demis Hassabis suggest that artificial intelligence will serve humanity's good and contribute to its development. The potential effects of artificial intelligence technologies on religious ritual and thought also raise the possibility of traditional religious leadership roles being transformed by AI-supported systems. This situation poses a significant challenge for religious institutions and leaders. The scenario of advanced artificial intelligence surpassing human intelligence and rising to a divine position has the potential to radically shake traditional religious understanding (Sturgill, 2019, 63).

In the field of artificial intelligence ethics, debates about whether machines can possess thinking ability hold an important place. In this context, the view that thinking is a function tied to humanity's immortal soul emerges as a noteworthy argument. According to this view, the immortal soul, bestowed by God only to humans, has not been given to other living beings or machines; therefore, animals or machines lack the ability to think. The belief that human spiritual characteristics are unique to humans is a reflection of traditional religious perspectives in these discussions (Descartes, 1999, 17-22; Flanagan, 2002, 163). However, famous artificial intelligence researcher Alan Turing opposed this view and proposed a broader perspective. According to Turing, creating intelligent beings through machines should be thought of as a process similar to human procreation and should be considered not as an interference with God's creative power but as an attempt to provide a host for souls created by God (Turing, 1950,

442). Turing's perspective sets the groundwork for theological discussions, particularly in the context of artificial intelligence and transhumanism. The idea that humanity will transform into a perfected species through technology raises a series of theological issues. Transhumanist discourses parallel some heterodox Christian thought movements with goals such as humanity's search for perfection, desire for immortality, and unlimited will. In this context, some approaches reminiscent of Manichaeism's body-soul dualism are noteworthy; here, the body is perceived as a kind of prison, and the liberation of the soul or will is targeted. The claim of Pelagianism, considered heretical in Christian theology, that humans can achieve perfection through their own efforts, finds echo in transhumanist thoughts. Similarly, as in Gnosticism, knowledge is presented as a salvific secret. However, such approaches generally conflict with mainstream Christian teachings. Waters (2016, 197-204) emphasizes that the pursuit of immortality in transhumanism is incompatible with Christian teachings and considers human lifespan as an opportunity to prepare for eternal life with God. According to this perspective, humanity's mortal nature should be seen as an opportunity to connect with God.

One of the current debates in artificial intelligence ethics is whether artificial intelligence can possess a soul. This question gains importance in terms of technological developments forcing a reassessment of religious and philosophical paradigms. The concept of the soul is accepted as the essence and determining element of human existence in many religious and philosophical traditions. In Western thought, the soul is generally understood as an immortal, non-material being representing an individual's core self. In this context, Plato and Aristotle's understanding of the soul has paradigmatic importance in the history of philosophy. Plato conceptualized the soul as ontologically separate and different from the body. According to him, the soul is the source of existence and the fundamental element of vitality. In Plato's system, the soul has an existence independent of the material world and is immortal; the body is seen as a temporary and material structure, a worldly manifestation of the soul. Aristotle, however, defined the soul not as a substance independent of the body but as a form inherent to the body or bodily functionality. According to Aristotle's approach, the soul is not a separate entity from the body, but rather the body's form and functionality (Ödemiş, 2022, 61). In many dualists philosophical and religious teachings, it is argued that humans consist of a material body and a spiritual soul. According to this approach, the soul is accepted as a divine element that distinguishes humans from other living beings, giving them reason, will, consciousness, and moral responsibility. The human soul is assumed to come from a divine source and be immortal. Especially in Christianity, the soul is seen as part of the relationship with God and the center of human spiritual life. Christian thinkers interpret transhumanists' goal of separating mind from body and transferring it to artificial environments as a rejection of the soul. This situation is evaluated as a departure from the natural form in which God created humans and as a "second fall" (Herzfeld, 2016, 125). The relationship between artificial intelligence and the concept of the soul also causes significant discussions in the context of the Islamic thought tradition. From an Islamic perspective, the soul is accepted as a divine essence bestowed upon humans by Allah and is seen as the carrier of moral and spiritual qualities. Various views have been put forward among Islamic thinkers regarding the nature of the soul and its relationship with the body. The fundamental discussion in the Islamic thought tradition has focused on the ontological status of the soul and its relationship with the body. Some thinkers treat the soul as a material form and

define it as a subtle body, while others accept it as an abstract entity or accident. This second approach considers the soul as a substance separate and independent from the body. The view that the soul is a divine substance is accepted as a quality unique to humans, and it is thought that such a spiritual entity does not exist in artificial intelligence systems. Transhumanist approaches aim to transform the human body and mind through science and technology, overcoming limitations such as disease, aging, and death. In this context, transhumanism's approach to the concept of soul differs significantly from traditional religious and philosophical perspectives. While transhumanists view the soul as a scientifically understandable and transformable phenomenon, traditional approaches generally treat the soul as an integrated and supernatural entity with the body, emphasizing the determining effect of the soul on human identity (Lilley, 2013, 25). There are also views trying to reconcile artificial intelligence and the concept of the soul. For example, computer science professor Russell C. Bjork (2008, 101) suggests that artificial intelligence can have a soul and this would not diminish human theological value. According to Bjork, there is no fundamental theological conflict between artificial intelligence studies and the Bible's understanding of humans. On the contrary, Christianity's understanding of intelligence concepts can guide the development and understanding of the limits of artificial intelligence. In conclusion, the relationship between artificial intelligence and the concept of soul is a complex and multidimensional area of discussion from both an Islamic perspective and other religious and philosophical traditions. These discussions necessitate approaching fundamental philosophical questions such as human nature, consciousness, moral responsibility, and the meaning of existence in a new context. The rapid progress of technological developments indicates that these discussions will deepen further and the relationship with human religious and philosophical foundations will be reassessed.

Conclusion

While the rapid development of artificial intelligence technologies is transforming human life in many areas, it has also brought significant ethical and theological issues to the forefront. Within the scope of this study, the technical infrastructure of artificial intelligence, the distinction between weak and strong artificial intelligence, and these technologies' efforts to imitate human intelligence have been examined in detail. Fundamental ethical issues such as autonomy, responsibility, transparency, and justice in artificial intelligence's decision-making processes demonstrate that technology must be addressed not only from technical but also social and legal perspectives. Autonomous systems, particularly lethal autonomous weapons and decision-making mechanisms controlled by artificial intelligence, pose serious risks in terms of human rights and individual freedoms. Additionally, theological debates such as whether artificial intelligence can gain consciousness and whether these conscious systems can possess spiritual status necessitate a deep reflection process on human-machine relationships. The association of artificial intelligence with human creation and God's power of creation raises new theological questions through concepts of humanity's place in the universe and free will. Consequently, the development of artificial intelligence is considered not only as scientific and technological progress but also as a metaphysical and philosophical challenge for humanity. Developments in artificial intelligence and robotics necessitate the revision of traditional

religious and ethical understandings. In this context, disciplines such as theology, philosophy, ethics, and technology need to come together to examine these issues in depth with an interdisciplinary approach and develop new paradigms. Developing technology in harmony with social values will play a fundamental role in building artificial intelligence systems that will advance humanity. A comprehensive examination of the ethical and theological dimensions of artificial intelligence is vital for overcoming potential future challenges and utilizing these technologies for the benefit of humanity.

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A New Dimension in the Paradigm of Social Change: Artificial Intelligence and the Transformation of Religious Life

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Abstract

This article examines the potential effects of artificial intelligence, which is characterised as the latest and perhaps the most radical technological transformation in human history, on religious life and belief systems in the context of the paradigm of social change from the perspective of the change of religious life. While rapidly developing artificial intelligence technologies make their impact felt in all areas of social life, they also raise fundamental questions about human existence, the search for meaning and ethical values. In this context, the main purpose of this article is to analyse the reflections of artificial intelligence on religious life from the perspective of social change and to address the possible effects of this new technology on belief systems, religious life, ethical values and social structures. The main justification of the article is that the transformation created by artificial intelligence is progressing rapidly and has begun to penetrate almost every aspect of social life. Artificial intelligence is no longer only a subject of the world of science and technology but is also becoming a focal point of social sciences. This article aims to meet the need to understand and make sense of the impact of artificial intelligence on religious life, based on the idea that this transformation should be addressed in terms of social change. In this article, based on the findings obtained by observation method, it is determined that the concept and applications of artificial intelligence trigger important questions about religious beliefs in the minds of individuals. In particular, the achievements of artificial intelligence that exceed human abilities and examples of its use in religious practices lead to thoughts that contradict existing religious beliefs in some individuals. This finding obtained through observation shows that the effects of artificial intelligence on religious life are not just a theoretical discussion, but a concrete analysis supported by observational data. The article also adopts a historical perspective to understand the potential impacts of artificial intelligence on religious life and social change. The transformative effects of previous technological revolutions (from the discovery of fire to the Internet) on social structures, belief systems, and lifestyles that have profoundly influenced human history are discussed. The new questions, searches and adaptation processes brought about by these revolutions are emphasised. Based on this historical context, the article argues that artificial intelligence has the potential to have a similar impact. In this context, the paper evaluates the potential effects of artificial intelligence on religious beliefs, ethical values and traditional authority that may emerge in areas such as advances in the field of medicine, potential virtual worship practices, possible robot imam figures, personalisation of religious education materials and gene editing. The article also draws attention to the potential risks of artificial intelligence. Issues such as the possibility of artificial intelligence getting out of human control and becoming a threat to humanity, the proliferation of autonomous weapons, genetic selection and manipulation are discussed, and it is emphasised that measures should be taken against these risks. The most important feature that distinguishes this article from other artificial intelligence studies is that it focuses on the effects of this technological revolution on religious life in the context of social change and addresses its possible effects on belief systems, religious practices, ethical values and social structures in a multi-faceted way. This article provides a comprehensive overview of the potential effects of the artificial intelligence revolution on religious life and social change and is believed to lay the groundwork for future research in this field. Again, this study presents the idea that a new dimension will emerge with artificial intelligence in the classical phases

of social change as traditional, modern and postmodern, and perhaps this dimension may add a new phase to the phases of social change. This new phase can also be called “artificial intelligence society”.

Keywords

Sociology of Religion, Artificial Intelligence, Society, Religious Life

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Toplumsal Değişim Paradigmasında Yeni Bir Boyut: Yapay Zeka ve Dini Yaşamın Dönüşümü

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Öz

Bu makale, insanlık tarihinin en son ve belki de en köklü teknolojik dönüşümü olarak nitelendirilen yapay zekânın, toplumsal değişim paradigması bağlamında dini yaşam ve inanç sistemleri üzerindeki potansiyel etkilerini dini yaşamın değişimi perspektifinden incelemektedir. Hızla gelişen yapay zekâ teknolojileri, toplumsal yaşamın tüm alanlarında etkisini hissettirirken, aynı zamanda insanın varoluşuna, anlam arayışına ve etik değerlere dair temel soruları da gündeme getirmektedir. Bu bağlamda, makalenin temel amacı, yapay zekânın toplumsal değişim perspektifinden dini yaşama yansımalarını analiz ederek, bu yeni teknolojinin inanç sistemleri, dini yaşam, etik değerler ve toplumsal yapılar üzerindeki olası etkilerini ele almaktır. Makalenin temel gerekçesi, yapay zekânın yarattığı dönüşümün hızla ilerlemesi ve toplumsal yaşamın hemen her alanına nüfuz etmeye başlamasıdır. Yapay zekâ, artık sadece bilim ve teknoloji dünyasının bir konusu değil, aynı zamanda sosyal bilimlerin de odak noktası haline gelmektedir. Makale, bu dönüşümün toplumsal değişim açısından ele alınması gerektiği düşüncesinden hareketle, yapay zekânın dini yaşama olan etkisini anlama ve anlamlandırma ihtiyacını karşılamayı hedeflemektedir. Makalede, gözlem yöntemiyle elde edilen bulgulara dayanarak, yapay zekâ kavramının ve uygulamalarının bireylerin zihninde dini inançlara dair önemli sorgulamaları tetiklediği tespit edilmiştir. Özellikle yapay zekânın insan yeteneklerini aşan başarıları ve dini pratiklerdeki kullanım örnekleri, bazı bireylerde mevcut dini inançlarla çelişen düşüncelere yol açmaktadır. Bu empirik bulgu, yapay zekânın dini yaşam üzerindeki etkilerinin salt teorik bir tartışmadan öteye, gözlemsel verilerle desteklenen somut bir analiz olduğunu göstermektedir. Makalede ayrıca, yapay zekânın dini yaşam ve toplumsal değişim alanlarındaki potansiyel etkilerini anlamak için tarihsel bir perspektif benimsenmiştir. İnsanlık tarihini derinden etkileyen önceki teknolojik devrimlerin (ateşin keşfinden internete kadar) toplumsal yapılar, inanç sistemleri ve yaşam tarzları üzerindeki dönüştürücü etkileri ele alınmıştır. Bu devrimlerin beraberinde getirdiği yeni sorular, arayışlar ve adaptasyon süreçleri vurgulanmıştır. Bu tarihsel bağlamdan yola çıkarak, makale yapay zekânın da benzer bir etki yaratma potansiyeline sahip olduğunu savunmaktadır. Bu bağlamda, yapay zekânın tıp alanındaki ilerlemeleri, potansiyel sanal ibadet uygulamaları, olası robot imam figürleri, dini eğitim materyallerinin kişiselleştirilmesi ve gen düzenleme gibi konularda ortaya çıkabilecek dini inançlar, etik değerler ve geleneksel otorite üzerindeki potansiyel etkileri değerlendirilmektedir. Makale, ayrıca yapay zekânın potansiyel risklerine de dikkat çekmektedir. Yapay zekânın insan kontrolünden çıkma ve insanlık için bir tehdit haline gelme olasılığı, otonom silahların yaygınlaşması, genetik seçim ve manipülasyon gibi konular ele alınarak, bu risklere karşı önlemler alınması gerektiği vurgulanmaktadır. Makaleyi diğer yapay zekâ çalışmalarından ayıran en önemli özellik, bu teknolojik devrimin toplumsal değişim bağlamında dini yaşama etkilerine odaklanarak, inanç sistemleri, dini pratikler, etik değerler ve toplumsal yapılar üzerindeki olası etkilerini çok yönlü bir şekilde ele almasıdır. Bu makale, yapay zekâ devriminin dini yaşam ve toplumsal değişime olan potansiyel etkilerine dair kapsamlı bir bakış sunarak, bu alanda yapılacak araştırmalar için bir zemin hazırladığına inanılmaktadır. Yine bu çalışma, geleneksel, modern, postmodern olarak klasikleşmiş toplumsal değişim evrelerinde, yapay zekâ ile birlikte yeni bir boyutun ortaya çıkacağını ve belki de bu boyutun

toplumsal deęişim evrelerine yeni bir evre ekleyebileceęi düşüncesini sunmaktadır. Bu yeni evreye “yapay zekâ toplumu” da denebileceęi değerlendirilmektedir.

Anahtar Kelimeler

Din Sosyolojisi, Yapay Zeka, Toplum, Dini Yaşam

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Introduction

Throughout history, the lifestyles and cultural structures of societies have undergone profound changes due to various inventions and discoveries. Important turning points such as the discovery of agriculture, the invention of fire, and the invention of the wheel have radically changed the life and social structures of societies. With the discovery of fire, which was accepted to have been discovered about 1 million years ago, humanity has made an important progress in the struggle for survival by meeting basic needs such as lighting, heating, and cooking. Fire also played an important role in protection from wild animals and tool making. Another social effect of the discovery of fire was the strengthening of social bonds and the development of a common sense of identity by gathering people around it.

One of the most important turning points in human history was the discovery of agriculture. The discovery of agriculture, which took place about 12,000 years ago, allowed people to transition from a hunting and gathering lifestyle to settled agricultural societies. Settled agricultural societies began to live in fixed places, engaged in agricultural activities to meet their food needs, and this situation allowed population growth. On the other hand, with the discovery of agriculture, the concept of private property emerged, and social classes were formed through land ownership. This situation led to permanent and effective changes in the social structure. Along with agriculture, the process of urbanisation began, and complex social structures emerged. Another revolutionary invention that transformed societies was the wheel. This invention greatly increased the efficiency of manpower and paved the way for the development of new technologies such as water mills, weaving looms, and agricultural tools. These developments contributed to the increase in economic welfare and the emergence of new professions.

The invention of the printing press, perhaps one of the most important social changes, initiated a major transformation in the dissemination of information and the sharing of ideas and triggered an unprecedented process of intellectual change and development. The mass printing of books led to an increase in literacy and the development of new currents of thought. By the end of the 17th century, social life underwent a major change with the introduction of steam power, which paved the way for the industrial revolution. This invention led to radical changes in production and transportation, contributed to the establishment of factories, and accelerated urbanisation. Urbanisation and the establishment of factories led to the emergence of the working class in terms of social stratification.

While humanity was still adapting to the social transformation enabled by steam power, the discovery of electricity in the 19th century opened the doors to an era that would completely change the future of humanity. Electricity not only accelerated the changes brought about by steam power but also introduced new dimensions to production, communication, and daily life practices. Lighting radically changed social life by blurring the distinction between day and night. Electric machines increased productivity in factories and enabled new production models. New means of communication, such as the telegraph and telephone, enabled information to be shared faster and more widely, taking the first steps towards globalisation. The possibilities that

emerged with electricity were effective not only in technological progress but also in the reshaping of social life.

Following all these technological advances, developments in the 20th century brought revolutionary changes in the field of information and communication. In the first half of the 20th century, with the invention of the computer, a great transformation in information processing and communication emerged, and a new information age began. The information age led to radical changes in the economy, science, education, and daily life, facilitated globalisation, and access to information. In the second half of the 20th century, humanity was introduced to the Internet. The Internet laid the foundation of the information age by enabling their instant and global sharing of information and paving the way for the development of new communication tools and platforms. It has contributed to the emergence of new areas such as e-commerce, e-government, e-learning, and the development of democracy by increasing social and political participation.

Following the 20th century, which was characterised by technologies such as computers and the internet and the radical changes they brought with them, artificial intelligence in the first quarter of the 21st century indicates that we are on the threshold of a new era in human history. Artificial intelligence, which multiplies the possibilities provided by the information age, is not only a technological innovation but also has the potential to redefine social structures and human nature. Artificial intelligence, which has the potential to revolutionise every aspect of life from healthcare to production processes, from education to finance, also raises critical issues such as the future of the labour market, the re-evaluation of ethical values, and the questioning of the limits of human intelligence. The construction of the future promised by artificial intelligence requires progress by seeking comprehensive and multifaceted answers to these questions.

In this article, the possible effects of artificial intelligence, which is considered a new dimension in the paradigm of social change, on religious life and belief systems will be discussed. In the context of the transhumanism movement, which aims to transcend human nature, the qualities attributed to artificial intelligence and the tendency to position this technology instead of God in some circles will be examined. It will be discussed what kind of questions the radical changes that artificial intelligence can create in belief systems in the eyes of individuals and society can lead to on religious and ethical values; predictions made in this regard will be included.

In this study, qualitative research method was used to understand the effects of artificial intelligence on religious life. In this context, it is aimed to obtain a versatile data set by using both literature review and observation method. Within the scope of the study, the relevant literature was reviewed and the effects of artificial intelligence technologies on religious practices, social solidarity and social justice were analysed. The way individuals interact with artificial intelligence, their reactions to artificial intelligence and examples of the use of this technology in religious practices were analysed through the observation method. During the observation process, the reactions of the participants in the seminars and conferences on artificial intelligence given by the author on various platforms were also analysed, and individuals' perception of artificial intelligence and their

approaches to this technology in a religious context were evaluated. The literature review was carried out in the form of a comprehensive document review to evaluate the reflections of artificial intelligence on social and religious change in a theoretical framework. The data obtained were analysed with the theoretical analysis method based on the sociology and sociology of religion literature, and the effects of artificial intelligence on religious sociability and individual belief systems in the paradigm of social change were examined. The combined evaluation of the literature review and observation data allowed us to evaluate the religious and social effects of artificial intelligence from an interdisciplinary perspective with the approaches in the existing literature.

1. Social Changes and New Dimension in History

Societies have been constantly developing and transforming throughout history. This transformation process has become more evident with the revolutions occurring in certain periods. Social revolutions have brought about radical changes in many areas, from individuals' lifestyles to social relations, from economic structures to political systems. Religion is an indispensable element in influencing and shaping civilisations in terms of ensuring the formation of common values among the members of a society, creating a spiritual bond between individuals, and ensuring that the same meanings are attributed to the same concepts among the members of the society.¹ In this context, religion plays an important role in shaping the social structure and guiding revolutionary changes.

There are many factors that trigger social change. Among these factors, transformations in science and technology, institutional structures, cultural norms, management styles, communication networks and demographic characteristics have a decisive importance. Although these factors function in a structure that affects and feeds each other, technological transformations differ in terms of their potential to trigger other social structures, especially the cultural structure. Indeed, when we look at the historical course of inventions that radically transformed the social structure, the determining role of technology in cultural change becomes even more evident. The language used by the individuals who make up the society, the values they adopt, the systems they believe in, and the lifestyles they lead are in a constant transformation under the influence of technological advances. Therefore, technological developments play a critical role in determining the direction and effects of cultural change. These changes subsequently bring about significant transformations in other institutional structures, management styles, communication networks, and even demographic characteristics of the society.²

The speed of this process of change has become more evident, especially with the technological inventions that have brought about radical changes in the social structure. When the historical course of inventions that radically transformed the social structure is analysed, it is not known exactly how long it took to transition from hunter society to agricultural society. While the transition from agricultural society to the first industrial society took approximately

¹ Abdulaziz Kırınşal, *Hız Peygamber'in Hadis ve Sünneti Bağlamında İslam Medeniyeti* (İstanbul: Ravza Yayınları, 2023), 26.

² Gülbaşak Diktaş Yerli, "Sosyal Değişime Perspektifinden Yapay Zekâ Üzerine Bir Değerlendirme", *Social Sciences Studies Journal* 115/115 (2023), 8533.

5,000 years, the 2nd industrial revolution emerged approximately 200-300 years later, and the 3rd industrial revolution 80-100 years later. The pace of change accelerated even more in the transition to the 4th revolution, and this transformation started to manifest itself in a short period of about 30-40 years.³ The increase observed in the historical course of the speed and intensity of social change has led to the emergence and sociological definition of different social stages. Although some sociologists define the stages of social change differently, the following stages can be mentioned in general:

1.1. Traditional Society / Agricultural Society / Pre-Industrial Society

Traditional societies are characterised by an agrarian-based economic structure and slow social change. Life is largely organised around established traditions and strong religious beliefs. Religion is not only a belief system but also the basis of social order, moral values, and worldview. Religious rituals permeate every aspect of daily life; important transitions such as birth, marriage, and death are celebrated with religious ceremonies. Religious leaders have considerable authority in society and form the moral compass of society. Family ties are strong, and status is fixed. Collective identity is prioritised over individual identity. Technological development is limited, and knowledge accumulation is based on experience and oral transmission.

1.2. Modern Society/ Industrial Society

Modern society is the product of a transformation process that started with the Industrial Revolution and deeply shook the social structure. In this period, scientific rationality and rationality came to the fore, and traditional ways of thinking and institutions began to be questioned. While industrialisation led to great increases in production, it accelerated the transition from rural to urban life and paved the way for the formation of new social classes. The influence of religious beliefs and institutions has significantly decreased in this process. Religion, which was at the centre of life in traditional societies, was pushed from the public sphere to the private sphere in modern society and became an individual choice. Secularisation, i.e., the decline in the influence of religion in social life, has emerged as an important feature of modernisation. However, the influence of religion did not disappear completely; individual beliefs and worship continued in the private sphere. This period is a critical period for understanding how religion interacts with and transforms the modern world. Modern man has found the opportunity to freely define his relationship with religion, which has brought diversity in religious life.

1.3. Postmodern Society / Post-Industrial Society

Emerging in the late 20th century, postmodernism rejects the strict rules and uniformity of modernity. Concepts such as individuality, diversity, and identity come to the fore. Religion begins to be seen as a phenomenon open to different interpretations.⁴ Scientific research and technological advancements play an important role in the emergence of these phases and the

³ Ercan Öztemel, *Yapay Zekâ ve İnsanlığın Geleceği*, ed. Muzaffer Şeker vd. (Turkish Academy of Sciences, 2020), 99-100.

⁴ Halil İbrahim Bahar, *Sosyoloji* (Ankara: Usak Yayınları, 2009), 26; Anthony Giddens, *Sosyoloji* (İstanbul: Kırmızı Yayınları, 2012), 69-73.

acceleration of social change. In today's world, these factors, which transform the social structure by providing new knowledge and methods, are recognised as one of the main determinants of social change. Technology, which can be defined as the concretisation and application of new knowledge obtained as a result of scientific research, facilitates daily life with the innovative methods it offers in society and enables this facilitation to be adopted more rapidly. These advances in science and technology diversify communication methods and accelerate the dissemination of information, and this speed is also reflected in the communication and relations between individuals.⁵ However, social change is not limited to technology. A wide range of factors such as globalisation, migration movements, political events, cultural interactions, economic crises, social movements, and environmental problems can also trigger social change. For example, global pandemics can transform societies' behavioural patterns and values and demands for social justice can reshape social norms. Understanding social change requires analysing these complex and multifaceted interactions.

When we analyse historical examples of this rapid change, the effects of the great revolutions in world history on social changes are clearly visible. Steam power, electricity, and technology are the main representations of revolutions that radically transformed social structures. Today, artificial intelligence is being added to this list of transformative forces, ushering in a new phase of social change.⁶ In this context, in addition to the phases of social change defined as traditional society, modern society, and postmodern society, it can be said that artificial intelligence society should be considered as a separate category.

1.4. New Dimension: Artificial Intelligence Society

Artificial intelligence, a technological development, is a catalyst for the latest and fastest changes in humanity, ushering in a new social phase that differs significantly from postmodernism. The working principles of artificial intelligence, its imitation of human intelligence, and its continuous learning distinguish it from other technological developments and multiply its social impact. This situation leads to radical changes in all areas, from production to education, health services to art. In the artificial intelligence society, individuality and diversity, which postmodernism focuses on, are shaped by algorithms and big data. Knowledge becomes not only pluralistic and relative but also a commodity that is processed, analysed, and even produced by artificial intelligence. Contrary to postmodernism, artificial intelligence has the potential to create new “grand narratives” through big data analysis. These narratives are not human-centred but data-centred, constructing social reality in different way.

One of the most fundamental differences of artificial intelligence society from postmodernism is the redefinition of the relationship between man and machine. While technology functions largely as a tool under human control in the postmodern society, this dynamic is changing in the artificial intelligence society. With their increasing autonomy, artificial intelligence systems are beginning to take on an equal or potentially more dominant role with humans in decision-making processes. This situation brings new problems and debates in ethical, legal, and social terms. For example, automated decision-making mechanisms,

⁵ Yerli, “Sosyal Değişme Perspektifinden Yapay Zekâ Üzerine Bir Değerlendirme”, 8533.

⁶ Ahmet Dağ, *İnsansız Dünya Transhümanizm* (İstanbul: Ketebe Yayınları, 2022), 123.

algorithmic biases, and the impact of artificial intelligence on the workforce are important points where the artificial intelligence society differs from postmodern society. Artificial intelligence, which has gained a multidisciplinary structure over time, plays an important role in both science and social sciences. Artificial intelligence, which has a great impact on solving complex problems in science, has started to be used in social sciences to find solutions to individual and social problems.⁷ These effects of artificial intelligence, by reshaping the organisation of social life, the relationships, values, and beliefs of individuals, signal the transition to a new phase of human history, the artificial intelligencesociety. In this new phase, the role and meaning of human beings in the social structure is being questioned again, and human-machine interaction is becoming the determining element of social order.

2. Transhumanism as the Philosophical Framework of Artificial Intelligence

In today's world, where the social structure is increasingly shaped by the phenomenon of artificial intelligence, in order to fully comprehend the social effects of artificial intelligence, it is essential to go back to the origins of this technology and to understand one of the philosophical movements that feeds it, transhumanism. Transhumanism, which can be defined as "going beyond the human", is considered a continuation of humanism and aims to develop human beings beyond their biological limits.⁸ Transhumanism is based on the understanding that technology must overcome the incompleteness inherent in human creation. In this context, a "transhuman" being will emerge. This new being can be a person whose foot is amputated and replaced with a prosthesis, or a person whose thoughts can be digitally controlled by implanting a chip in his/her brain. Transhumanism also has an evolutionary approach. The human being supported by technology is now transhuman and has undergone a new evolution. With transhumanism, natural selection is likely to be replaced by technological selection.⁹ In other words, it is a situation where the human being, who continues his natural evolution, now lives a life supported by technology, which can be called half human and half robot.

Since the beginning of its existence, humanity has strived to understand how the brain works and has dreamed of creating a copy of its own mind.¹⁰ This curiosity continues to influence the world of science today. The discovery of fire, the discovery of seed, the invention of new tools to increase agricultural productivity, and the construction of machines are all products of this quest. As is known, the first industrial revolution started in the late 17th century. The invention of the first machine using steam power is regarded as the beginning of a new era in world history and is considered the pioneer of important social changes. Even the inventors of the machines could not predict where this invention would lead. With the discovery of electricity and mass production capacities, the mechanisation process accelerated, and the

⁷ Utku Köse, "Yapay Zeka Etiği Çerçevesinde Geleceğin İşletmeleri: Dönüşüm ve Paradigma Değişiklikleri", *Journal of Engineering Sciences and Design* 8/5 (29 Aralık 2020), 290-305; Keith T. Butler vd., "Machine Learning for Molecular and Materials Science", *Nature* 559/7715 (Temmuz 2018), 547-555; Tarık Ak, "Technologies, Security and Crime", *SDE Journal of Academy* 1 (Nisan 2021), 117.

⁸ Seyithan Can, "Yeni Gölgeler: Dijital Evren, Yapay Zeka, Transhümanizm" (DİB, 2023), 117.

⁹ Ahmet Dağ, *İnsansız Dünya Transhümanizm*, 90-91.

¹⁰ For a summary of studies on this subject since antiquity, see: Bruce G. Buchanan, "A (Very) Brief History of Artificial Intelligence", *AI Magazine* 26/4 (15 Aralık 2005), 53-60.

industrial society emerged as an indicator of the development of societies. These searches continued and the dream of making automatic machines led to the invention of computers and advances in information technology. These developments have enabled businesses to start working with automatic machines and software applications. Especially in the 1950s, some scientists thought that since automatic machines could be made, an artificial brain could also be made, and they concentrated their studies in this direction. Pioneering researchers such as Allen Newell and John McCarthy took the first steps toward endowing robots with intelligence by developing programs that, although quite simple by today's standards, laid the foundation for modern advancements. In 1956, at a conference held at Dartmouth, these developments were named "Artificial Intelligence" and the birth of a new branch of science was announced.¹¹

Although it some argue that the origins of artificial intelligence date back to ancient times,¹² the beginning of its development in the modern sense coincides with the World War II period. In this period, discussions on artificial intelligence started when Alan Turing raised the question "Can machines think?" and the machine developed by Turing for decryption became the pioneer of research in this field. After Turing's work, many researchers continued their studies on artificial intelligence and made significant progress in this field.¹³ Especially the 2000s are accepted as the period when artificial intelligence began to demonstrate its impact on social life as a technology. Artificial intelligence and thinking machines started to attract the attention of the masses in this period. One of the most striking examples of this period is the loss of the world chess champion Garry Kasparov in a match with a computer called Deep Blue produced by IBM. Another remarkable example is the journey of Sofia, a robot with artificial intelligence and a physical body produced by Hanson Robotics, which started with the broadcasting of her conversations with her producers on YouTube, which resulted in her being a guest on The Tonight Show Starring Jimmy Fallon, one of the most famous talk shows in the USA, and then being granted citizenship by Saudi Arabia.¹⁴ In the context of all these surprising developments, it can be said that transhumanism is considered the second enlightenment.¹⁵

3. Social and Biological Impacts of Artificial Intelligence Technologies

Drawing the current boundaries of artificial intelligence technology is extremely difficult due to the rapidly evolving nature of artificial intelligence. The "end point" in this field is constantly being redefined, and each milestone set can be left behind in a short time. Therefore, to grasp the true potential of artificial intelligence, it would be more enlightening to focus on the general growth trends of the sector rather than momentary developments. Indeed, recent years have witnessed a remarkable surge in investments in artificial intelligence. According to a 2021 study, global artificial intelligence investments reached USD 62.2 billion in 2020, making

¹¹ Öztemel, *Yapay Zekâ ve İnsanlığın Geleceği*, 101.

¹² Buchanan, "A (Very) Brief History of Artificial Intelligence", 53-60; Anooshirvan Miandli, *Yapay Zekâ Kitabı* (Ankara: Bilgi Yayınevi, 2024), 78.

¹³ İpek Sucu - Elif Ataman, "Dijital Evrenin Yeni Dünyası Olarak Yapay Zeka ve Her Filmi Üzerine Bir Çalışma", *Electronic Journal of New Media* 4/1 (2017), 42.

¹⁴ Emin Adaş - Borabay Erbay, "Yapay Zekâ Sosyolojisi Üzerine Bir Değerlendirme", *Gaziantep University Journal of Social Sciences* 21/1 (26 Ocak 2022), 329-330.

¹⁵ Ahmet Dağ, *İnsansız Dünya Transhümanizm*, 9.

artificial intelligence one of the world's most invested sectors. This rapid growth is expected to continue. The global artificial intelligence market volume is estimated to be worth USD 196.63 billion in 2023, growing at a compound annual growth rate (CAGR) of 36.6% during the period 2024-2030.¹⁶

Artificial intelligence continues to progress at an astonishing pace as of 2024, when these lines are written. It is becoming increasingly difficult to follow current developments in the field of artificial intelligence and to make accurate predictions for the future in the face of this rapid change. Indeed, many scenarios that are considered as “possible in the future” in recent books in the field of artificial intelligence have become reality today. For example, in Toby Walsh's 2020 book “The World of Artificial Intelligence 2062”, we see that Elon Musk is working on an interface that will directly connect the human brain to computers, and Walsh expresses doubts about whether this technology will enable humans to compete with machines.¹⁷ However, at the point we have reached today, we know that paralysed individuals can control computer mice and even games with their thoughts thanks to chips implanted in their brains.¹⁸ This example is an indication that artificial intelligence technology has made astonishing advances in a much shorter time than anticipated. Similarly, models such as GPT-4o, announced by OpenAI on 14 May 2024, break new ground in the perception, understanding, and interaction capabilities of artificial intelligence.¹⁹ GPT-4o's ability to perceive images and interpret environmental data shows that artificial intelligence has the potential to lead to radical changes in all areas of our individual and social lives.

Artificial intelligence is seen as an important tool in achieving the goal of creating healthier individuals free from diseases with gene technology. With this technology, it is aimed to change the DNA of human beings to make new generations happier, healthier, and more intelligent. Experts predict that advancements in transhumanism and artificial intelligence could significantly impact human biology and reproductive capabilities. In this context, transhumanist thinkers such as Zoltan Istvan speculate that in the future, men will also be able to have a uterus and give birth through implantation. However, the development and ethical evaluation of such technologies require a multidisciplinary approach and extensive research. For the time being, such radical changes to male fertility fall into the realm of speculation rather than scientific reality. It is said that the artificial womb will free women from the obligation to bear children and thus undermine patriarchy, which is also the biggest argument of the feminist movement. Within the next 20 years, the development of tissue cloning and genetic engineering will produce fully functional breasts and genitals for transsexuals. In addition to these, it is said that existing sex robots will be made more functional and will have the performance and pleasure of a live person. When we look at why people may prefer sex robots, reasons such as being safer (no possibility of disease or pregnancy), being more convenient in terms of time, and having a

¹⁶ “Artificial Intelligence Market Size, Share, Growth Report 2030” (Erişim 20 Haziran 2024).

¹⁷ Toby Walsh, *2062 Yapay Zeka Dünyası* (İstanbul: Say Yayınları, 2020), 73.

¹⁸ Dan Hurley, “Ethical Questions Swirl Around Neuralink's Computer-Brain Implants”, *Neurology Today* 24/10 (16 Mayıs 2024), 1; For the news of the related incident, see: “Neuralink'in beynine çip taktığı ilk insan düşünerek fare imlecini oynatabildi” (20 Şubat 2024).

¹⁹ “Hello GPT-4o” (Erişim 20 Haziran 2024).

partner as desired come to the fore.²⁰ There may also be a future in which this situation may shake the family institution; people may want to fulfil their sexual needs in this way with little or no responsibility, many benefits of being a family can be easily provided by machines with artificial intelligence, and some people may no longer want marriage.

4. Artificial Intelligence and Society: A Development or a Threat?

Although artificial intelligence has the potential to lead to radical changes in many areas of human life, it is not yet clear whether these changes will be in favour of or against humanity. In this context, although artificial intelligence is considered to be one of the most important technological developments of our age, the risks and ethical problems it may bring along with the opportunities it offers require careful evaluation. The potential for misuse and the ethical dilemmas posed by artificial intelligence, particularly given its capacity to revolutionise sectors such as transportation, healthcare, finance, and law, cannot be overlooked. Therefore, the development of international regulations and ethical guidelines to maximise the benefits and minimise the risks of artificial intelligence is essential.

These debates about the benefits and risks of artificial intelligence constitute an important ground for us to understand its potential effects on social change. While one group argues that artificial intelligence will make life easier and increase wealth and prosperity, the other group draws attention to the dangers that this ease will bring with it.²¹ In particular, the possibility that machines, which may become equivalent to or superior to human intelligence, may destroy the human race is among the greatest fears.²² In addition to this possibility, there are also those who claim that artificial intelligence can never reach the level of human intelligence.²³ Therefore, it is of extreme importance to examine in depth the pros and cons of artificial intelligence that will cause social change.

How artificial intelligence will affect our perception of reality is an important issue that needs to be emphasised.²⁴ As a matter of fact, at the time of writing these lines, technologies have been developed in which videos can be produced through artificial intelligence programs, a person can be placed in environments where he or she has never been, voice imitations can be made, words that are not spoken by a person can be spoken through montage, and even lip movements can be imitated.²⁵ We can conclude that such technologies can easily deceive people and make it difficult to distinguish between the real and the fake.

Whether artificial intelligence technologies will increase inequality is also an important issue of debate. Especially in the early stages of technology, it is predicted that the rich will have

²⁰ Ahmet Dağ, *İnsansız Dünya Transhümanizm*, 91-106; Ahmet Dağ, *Transhümanizm İnsanın ve Dünyanın Dönüşümü* (Ankara: Elis Yayınları, 2020), 234.

²¹ Max Tegmark, *Yaşam 3.0* (İstanbul: Pegasus Yayınları, 2019), 50-55; Nick Bostrom, *Süper Zeka* (İstanbul: KÜY Yayınları, 2021), 144-145.

²² James Barrat, *Son İcadımız* (İstanbul: Pegasus Yayınları, 2020) 16-17.

²³ For detailed information see: Erik J. Larson, *Yapay Zeka Miti* (Ankara: Fol Yayınları, 2022).

²⁴ Martin Ford, *Robotların İktidarı*, Çev. Kadir Yiğit Us, (İstanbul: Kronik Kitap, 2022), 241-248.

²⁵ Ali Murat Kırık - Vahdet Özkoçak, "Medya ve İletişim Bağlamında Yapay Zekâ Tarihi ve Teknolojisi: Chatgpt ve Deepfake ile Gelen Dijital Dönüşüm", *Karadeniz International Scientific Journal* 58 (27 Haziran 2023), 73-99.

easier access to these technologies.²⁶ However, historically, it is known that technological developments have reached wider masses over time. This does not mean that technology will automatically make everyone equal. The impact of technological development on socioeconomic inequalities is much more complex than access. In particular, biases in the data used in the training and application of artificial intelligence algorithms can reinforce existing inequalities or create new ones.

In the context of the transhumanism movement, the idea that artificial intelligence could help people live longer is a separate topic of discussion when it comes to the effects it has on society. Prevention and treatment of diseases with artificial intelligence-supported technologies in the field of medicine may contribute to the prolongation of human life and increase the quality of life. However, the prolongation of life may also bring new psychological and social problems to the agenda. For example, while the awareness of the finitude of life leads people to lead a meaningful life and utilise their time, a long lifespan may reduce this motivation and decrease the satisfaction from life. In addition, problems such as population growth, resource depletion, and unemployment are also important challenges that a long-lived society may face.²⁷ Among the dangerous aspects of artificial intelligence, the possibility of destroying the human race is also discussed.²⁸ In this context, the possibility of this technology falling into the hands of the wrong people and being used for malicious purposes causes serious concerns. While states are expected to take measures in this regard, it should not be ignored that individuals or groups who want to seize this power before anyone else can carry out activities outside the legal regulations.

While technological advances have a promising potential to end wars, at the same time, overconfidence of the countries that acquire this power carries a risk that may lead to new conflicts. In particular, artificial intelligence technology may increase the potential of a country that is advanced in the military field to cause conflicts.²⁹ In this context, it is known that at least 65 countries around the world have developed combat robots.³⁰ In this respect, the issue of unmanned weapons with artificial intelligence creates a great debate. The possibility of the use of such technologies by countries that hold this power may cause serious concerns in the international arena. For example, scenarios such as an individual buying a drone, which costs a little more than his/her mobile phone, uploading a photo of his/her target, and the drone killing and self-destructing the target, reveal the potential for misuse of the technology.³¹ Another example illustrating the danger of unmanned autonomous weapons is a simulation test conducted by the US military in which an unmanned autonomous weapon controlled by artificial

²⁶ M. J. McNamee - S. D. Edwards, "Transhumanism, Medical Technology and Slippery Slopes" 32/9 (2006).

²⁷ Yusuf Emre, "Cenneti Dünyada Aramak: Ölümsüzlük Arzusu, Uzatılmış Yaşam ve Din", *Din ve Transhümanizm* (Ankara: Eski Yeni Yayınları, 2021), 183-185.

²⁸ Riccardo Campa, *Humans and Automata a Social Study of Robotics* (Peter Lang Edition, 2015), 18; Toby Walsh, 2062 Yapay Zeka Dünyası, 60.

²⁹ Ahmet Dağ, *İnsansız Dünya Transhümanizm*, 122.

³⁰ James Barrat, *Son İcadımız*, 72.

³¹ Max Tegmark, *Yaşam 3.0*, 157.

intelligence killed its operator in order to prevent interference in its efforts to fulfil its mission.³² There is a global outcry to ban the development and use of lethal autonomous weapons.³³

The use of artificial intelligence in the field of genetic selection and genetic engineering is another ethically controversial issue. The idea of creating more intelligent, healthy, and conscientious individuals by manipulating genes is generally considered to be a field that is generally avoided for moral reasons. However, when it is seen that children with superior qualities are born in one country by applying this technology, it is thought that other countries may tend to follow the same path. Scientists suggest that this technology may also introduce genes not present in the parents. Individuals who conceive a child can incorporate the gene from an intelligent individual, leading to the birth of more intelligent offspring. This situation may lead to genetic inequalities and ethical issues. Despite these dangers and risks, the potential benefits of artificial intelligence cannot be overlooked. The applications of artificial intelligence in the transportation sector offer the potential to increase traffic safety and optimise traffic flow thanks to driverless vehicles. Automated driving systems are expected to minimise accidents caused by human error and create a safer traffic environment. Thus, the aim is not only to reduce fatalities but also to improve traffic flow, leading to savings in both time and energy.³⁴

Artificial intelligence is thought to have the potential to solve complex problems that push the limits of human intelligence. By solving many problems that humanity has not been able to solve for many years, there is a possibility that significant progress can be made in science and technology. For instance, experts anticipate that the application of artificial intelligence in medical research will transform the diagnosis and treatment of illnesses. In this way, it is aimed to improve the health of individuals and increase the overall efficiency of health systems. Certain progress has been made in this regard, and news columns have even featured surgeries performed by robot doctors.³⁵ In the field of law, artificial intelligence is expected to make great contributions in ensuring justice. In contrast to the emotional and limited information-based decisions of human judges, robo-judges can provide detailed examinations of all files and have technical knowledge. Thus, it becomes possible to provide justice in a more objective and accurate manner. In addition, it is envisaged to create revolutionary changes in judicial processes thanks to the ability to detect the thoughts of criminals with artificial intelligence-supported brain reading techniques.³⁶ However, it is known that such applications raise privacy and ethical concerns. Analysing people's thoughts by entering their minds leads to serious problems in terms of personal freedom and privacy.

The effects of artificial intelligence on economic growth and welfare are also seen as an important advantage. It is thought that thanks to artificial intelligence technologies increasing productivity and making new discoveries, it is possible to increase wealth and welfare. The ability of artificial intelligence to offer more products and services by reducing production costs can raise the general standard of living of the society. In addition, innovations and solutions

³² For related news, see: "Yapay zeka destekli askeri drone, simülasyonda operatörünü öldürdü" (02 Haziran 2023).

³³ Toby Walsh, 2062 *Yapay Zeka Dünyası* 140.

³⁴ Max Tegmark, *Yaşam 3.0*, 134.

³⁵ For related news, see: "ABD'de ilk kez bir robot insan yardımı olmadan ameliyat yaptı" (27 Ocak 2022).

³⁶ Max Tegmark, *Yaşam 3.0*, 142-145.

offered by artificial intelligence can contribute to the emergence of new business areas and economic opportunities.³⁷

In summary, it is accepted that artificial intelligence technology has both potential advantages and serious risks. It is thought that the ethical dimensions of technological advances should be carefully evaluated and that it is critical to ensure that these technologies are used in a beneficial way for humanity. Thinkers such as Kurzweil argue that it is immoral to turn away from these technologies and that many problems that need to be solved can be overcome with these technologies.³⁸ However, it should not be forgotten that if these technologies are banned, they may go underground and create greater dangers.

5. Reshaping Religious Life in the Age of Artificial Intelligence

Artificial intelligence is a unique technological development that triggers social transformation at a speed and scope unprecedented in human history. Artificial intelligence differs from previous technological innovations with its continuously improving structure and its potential to imitate human-like thinking abilities. In this respect, it has the potential to lead to radical changes in all areas of human life, from production processes to education systems, from health services to artistic forms of expression. In addition to its effects on social structures and values, this transformation will inevitably have important consequences on religion and religious life. In addition to these potential effects, the effects of artificial intelligence on religious life have started to become evident through observations and research. In this context, it is important to consider not only possible impacts, but also actual impacts based on concrete observations. Some of these possible and actual effects can be listed as follows:

5.1. Transformation in the Relationship Between Religion and Science

It seems that the working principles of artificial intelligence will open the relationship between religion and science to discussion again. The surprising changes that artificial intelligence has brought about and will bring about are likely to question religious beliefs as well as reinforce them. Indeed, anecdotal observations suggest that individuals aware of the concept and potential applications of artificial intelligence are increasingly questioning the relationship between religion and science. These enquiries become particularly pronounced in areas where artificial intelligence's intervention in human life is growing, such as healthcare and biotechnology. Some individuals attribute artificial intelligence's accomplishments, especially those exceeding human capabilities, to a divine or quasi-divine force, while others interpret these developments as findings that challenge existing religious beliefs. The existence of a technology that "does what God does not do" in society as a result of the healing of diseases that have not been cured so far with artificial intelligence may lead to questioning.³⁹ Advances in the field of artificial intelligence open the door to promising developments in the medical world, especially in challenging areas such as paralysis treatment.⁴⁰ We can say that there is a possibility

³⁷ Max Tegmark, *Yaşam 3.0*, 169-170; Nick Bostrom, *Süper Zeka*, 194-195; Toby Walsh, 2062 *Yapay Zeka Dünyası*, 93-94.

³⁸ James Barrat, *Son İcadımız*, 168.

³⁹ Max Tegmark, *Yaşam 3.0*, 235.

⁴⁰ Recent research has shown the potential of artificial intelligence-powered interfaces to restore communication between the brain and the damaged area in cases of paralysis due to spinal cord injury. This technology may break new ground in

that the further progress of such developments may increase the religion-science conflict in society. In this context, it is possible that believers may question their religious teachings and belief systems. For example, treatment methods provided by artificial intelligence and biotechnological developments may lead to a re-discussion of the concepts of fate and divine will. Fate occupies a central position in many religious belief systems and includes the belief that the events that occur in the lives of individuals are predetermined by God. However, technologies such as artificial intelligence-supported medical interventions and genetic engineering may raise the question of whether the fate of individuals can be changed. In this context, the potential for families to have children with the genetic characteristics they desire through artificial intelligence causes intense debates, especially among religious groups. Our observations show that with the presentation of such technological developments, religious individuals question whether such interventions are against the divine will by referring to the understanding of creation and fate in sacred texts. Many participants stated that the act of creation belongs to God alone and that the acquisition of such power by human hands is ethically and religiously unacceptable.

5.2. Change in Religious Institutions and Practices

Artificial intelligence can transform the functioning of religious institutions and people's religious practices. Virtual prayers, robot imams or religious leaders, and artificial intelligence-assisted sermons may become widespread in the future. A notable example of the use of artificial intelligence in the field of religion is the artificial intelligence-assisted sermon in a church in Germany. In this experimental application, an artificial intelligence programme projected on a digital screen delivered a speech with religious content for forty minutes.⁴¹ This event brought up important discussions on how artificial intelligence can be used in the field of religious services and religious experience. Another example that can be given in terms of understanding the impact of artificial intelligence technology on the phenomenon of religion is the artificial intelligence robot that reads and learns prayers. The robot, which was manufactured in the shape of a mouth, was able to learn a prayer on its own and pronounce it out loud.⁴² With the change of time, changes in religious practices can also occur. Especially in our age when technology is moving very fast, discussions on the digitalisation of worship may arise. Again, artificial intelligence-supported voice assistants or other applications can help users remember or practice religious rituals. For example, thanks to smart glasses with artificial intelligence, a worshipping individual will be able to fulfil this ritual by following the prayers and sacred texts

the field of neurological rehabilitation by creating 'virtual bridges' that can enable patients to regain their mobility. In fact, there have been developments on this subject and the damaged area in the spinal cord of a paralysed person was repaired by artificial intelligence and enabled him to walk. Again, a woman who lost her ability to speak due to paralysis was seen to speak thanks to the chip connected to her brain. You have looked for related news: "Felçli Hasta, Yapay Zekalı Yazılımla Kontrol Edilen İmplant Sayesinde Yürüdü | Türkiye Yapay Zeka İnisiyatifi" (Erişim 20 Haziran 2024); "Felçli hasta yapay zeka sayesinde 20 yıl sonra ilk kez konuştu - Son Dakika Teknoloji Haberleri | NTV Haber" (Erişim 20 Haziran 2024).

⁴¹ "Almanya'da yapay zeka kilise ayininde vaaz verdi" (Erişim 20 Haziran 2024).

⁴² See for related news and video: Oğuz Gazan, "Yapay Zekanın Dini Ritüeli • Bigumigu", Bigumigu (blog), 19 Nisan 2022.

on the screen reflected on the glasses. This may facilitate the religious lives of individuals, but it may also question the role of traditional religious authorities.

5.3. Innovations in Religious Education and Theological Studies

Artificial intelligence can enable the personalisation of religious education materials and offer new perspectives on theological research through data analytics. In this regard, various courses and seminars have started to be held in our country in order to make more use of digital and artificial intelligence in the field of theology.⁴³ Artificial intelligence-supported educational platforms and digital archives can greatly improve access to religious knowledge and religious education processes. For example, digital archives and artificial intelligence-assisted translation systems developed by artificial intelligence tools enable the Qur'an, Bible, and other sacred texts to reach a wider audience and provide easy access to religious education materials.

5.4. The Ethical Question

It is controversial how artificial intelligence affects relations between people and how it shapes moral values. The interaction between artificial intelligence and religiously sacred issues might raise ethical debates due to potential changes arising from such interactions. CRISPR technology has made it possible to intervene in human genes. With the development of this gene technology, it is envisaged that diseased genes can be separated from healthy genes, and thus diseases that have not been solved so far can be treated. With this technology, it is possible for married couples to treat diseased genes that may be passed on from mother or father to the child, and even to ensure the birth of more intelligent children.⁴⁴ However, such interventions have the potential to cause serious conflicts with religious values. Such interference in the process of human creation maybe seen by many religious communities as a violation of the natural order and God's will.

5.5. Questioning in Religious Beliefs and Values

The impact of artificial intelligence on religious beliefs is a complex and multifaceted issue. On the one hand, artificial intelligence can provide access to believers by facilitating religious practices (such as virtual prayers and prayer reminders through voice assistants). On the other hand, artificial intelligence's capacity to analyse and interpret religious texts and even produce new texts may question the role of traditional religious authoritarians. The image of "divine wisdom" offered by artificial intelligence may weaken the authority of religious leaders or institutions, causing individuals to turn more towards their own interpretations. In particular, the individualisation of religious practices and beliefs may increase. Moreover, ethical discussions of artificial intelligence (e.g., gene technology) may contradict religious values and lead to confusion among believers. During the observation process, a seminar participant's question about potential conflicts between gene technologies and religious beliefs illustrated individual confusion on this issue. The participant expressed uncertainty about how gene technologies could be reconciled with religious teachings and expressed concern about the impact of developments in this field on belief systems. While artificial intelligence initiates new

⁴³ "Ana Sayfa | Dijital İlahiyat Araştırmaları (D-İA)", D-İA (Erişim 20 Haziran 2024).

⁴⁴ Ali Köse, "Transhümanizm: Yarın elbet Bizim!", *Journal of Social Sciences* 11 (Mayıs 2022), 198.

questions and debates on religious beliefs, it is still unclear exactly how these effects will be shaped and what consequences they will have.

There are many problems in the world that human intelligence cannot solve. Chief among these is the problem of existence. The intelligent explanations that artificial intelligence, which is thought to exceed human intelligence, will bring to the puzzles about the existence of the universe and humanity, may affect the state of belief in society. When we look at the reasons underlying the positioning of transhumanism and artificial intelligence instead of God by some thinkers called futurists, the claim that artificial intelligence can do or can do many things that God cannot or cannot do comes to the fore.⁴⁵ In addition to this, in the discourses of futurists, it is stated that the human being created by God is not happy and healthy in the perfect sense, but with artificial intelligence technology, human beings can be made happy and healthy.⁴⁶ The new moral dilemmas created by artificial intelligence may cause religious authorities to have difficulty in finding solutions and weaken religious beliefs.

5.6. The Shaking of Traditional Religious Authorities

The rise of artificial intelligence and transhumanist thought has the potential to undermine the authority of traditional religious authorities and institutions. Technological developments may necessitate a reassessment of the roles of religious leaders and institutions. For example, it can be said that the interpretations of artificial intelligence on religious texts may lead to the questioning of the fatwas and teachings of traditional religious authorities. In this context, during a conference, participants were presented with examples of fake verses and hadiths generated by artificial intelligence. Observations revealed that participants found it difficult to distinguish these fake texts from the real ones, which created a serious uncertainty in their beliefs. One participant expressed concern about the future of sacred texts and the potential loss of authenticity following this experience, stating that 'vaporisation of sacred texts' could be a possible outcome. This suggests that the impact of artificial intelligence on the interpretation and dissemination of sacred texts poses a new challenge to religious authorities. This situation has the potential to cause crises of authority and shifts in belief within religious communities. The emphasis of transhumanist thought on individual freedom and increasing potential may weaken social and religious ties. For example, with transhumanist thought, individuals may focus on increasing their personal abilities and capacities through technological means. This may lead to the collective identity and solidarity offered by religious communities being threatened by the ideology of individualism. The social bonds of religious communities may weaken, and social solidarity may be eroded.

5.7. Artificial Intelligence as God's Creation and Service to Humanity

Despite all these negative forebodings, there may be an acceptance among believers that artificial intelligence is a creation of God and sent to serve humanity. Indeed, in interviews with some individuals, artificial intelligence has been perceived as directly the work of God. According to this point of view, artificial intelligence can be considered a blessing from God, and

⁴⁵ "Transhumanism; Nick Bostrom and David Pearce Talk to Andrés Lomeña", *Literal Magazine* (14 Ocak 2013); "Inside Artificial Intelligence's First Church | WIRED" (Erişim 20 Haziran 2024); Neil McArthur, "Gods in the Machine? The Rise of Artificial Intelligence May Result in New Religions", *The Conversation* (15 Mart 2023).

⁴⁶ Ali Köse, "Transhümanizm: Yarın elbet Bizim!", 192.

technological developments can be seen as a manifestation of God's love and mercy towards humanity. For example, the possibilities offered by artificial intelligence in the field of health can be interpreted as a reflection of God's desire to heal people. Thanks to artificial intelligence, the early diagnosis of difficult-to-treat diseases such as cancer and the development of personalised treatment methods can be considered by believers as a blessing bestowed by God. This demonstrates an understanding whereby artificial intelligence is reconciled with religious beliefs, emphasising the positive aspects of technological advancements.

This perspective argues that the opportunities offered by artificial intelligence in health, education, and other fields can be used in line with God's will. For example, artificial intelligence-supported educational platforms can provide more effective and accessible methods in religious education, enabling younger generations to access religious knowledge more easily. This can be seen as a tool that supports the dissemination of religious knowledge and the strengthening of beliefs. Therefore, artificial intelligence can be considered by believers as a part of God's divine plan to build a better future for humanity. The solutions brought by artificial intelligence to environmental problems can also be evaluated from this perspective. The innovations offered by artificial intelligence in the fields of environmental protection and sustainability can be considered God's will to protect creation in terms of protecting natural resources and keeping the ecosystem in balance.

Conclusion

Artificial intelligence has become a radical phenomenon that has transformed the social structure, belief systems, ethical understandings, and daily practices of humanity. In this article, the effects of artificial intelligence on religious life and social structure are examined, and the reflections of this transformation on religious practices, social justice, ethical values, and individual belief systems are evaluated. While the possibilities offered by artificial intelligence provide advantages in terms of practices by facilitating individuals' access to religious practices, they create a process that requires us to reconsider the role of traditional authorities and social ties. In this context, artificial intelligence should be considered not only as a technological tool but also as an element that shapes the value systems and religious institutions of societies. First of all, artificial intelligence-supported religious practices and digitalised worship practices individualize belief systems and redefine the structure of religious communities. Virtual worship, robot imams, or artificial intelligence-assisted sermons are emerging as innovations that may undermine the importance of traditional religious spaces and collective worship. Such technologies may lead to a more isolated religious experience by reducing the necessity for individuals to perform their worship in a physical community. Especially the younger generations access religious information through digital tools and perform religious practices through these platforms. However, this situation may weaken the socializing and solidarity-enhancing role of religious life, leading to the dissolution of individuals' social ties and the spread of an individualized understanding of religious experience.

On the other hand, innovations such as artificial intelligence-supported educational platforms and digital archives facilitate the dissemination of religious knowledge by reaching large masses in the field of religious education. This situation provides access to religious

knowledge, especially for young people, and makes religious education more effective and widely accessible. Analysing sacred texts by artificial intelligence may allow different religious interpretations to emerge and individuals to discover new meanings of these texts. However, such innovations have the potential to question the role of traditional religious authorities, jeopardise authentic religious knowledge and shake the foundations of belief systems at the societal level. While the use of artificial intelligence tools in the interpretation of religious texts facilitates individuals' access to information based on religious texts, it also weakens the control over traditional interpretations and authorities. Furthermore, artificial intelligence has the potential to raise new questions about belief and value systems. The relationship between religion and science has been discussed more intensely than ever before with the ability of artificial intelligence to mimic the human mind. Medical interventions performed by artificial intelligence may lead to a re-evaluation of concepts such as fate and divine will. The possibilities of treatment and life extension provided by biotechnology and artificial intelligence may lead individuals to question the understanding of fate and cause transformations in religious belief systems. This situation raises new ethical questions, especially for believers, as religious values and technological innovations come into conflict.

The most important feature that distinguishes this article from other studies is that it analyses the effects of artificial intelligence on religious life at the individual and societal levels and examines the structural transformation of religious sociality from a comprehensive perspective. In a field where most studies focus more on how technology will affect religious institutions or religious beliefs, this study aims to analyse the effects of artificial intelligence in a broad context such as individuals' daily religious practices, social cooperation, and changes in the understanding of justice. As a contribution to the literature, this article aims to prepare the ground for future research by providing a framework on how the social appearance of religion is reshaped by artificial intelligence.

In conclusion, the multifaceted effects of artificial intelligence on social structure, religious institutions, and individual belief systems present both opportunities and challenges for different segments of society. The potential of these technologies to redefine individuals' religious practices and social bonds should be carefully considered by sociologists, ethicists, and religious authorities. The ability of religious institutions to maintain their position in the social structure during the age of artificial intelligence depends on their adaptation to this transformation process. Religious communities and authorities should develop strategies to ensure the continuation of social cohesion and justice by encouraging the use of these technologies within ethical boundaries while utilising the opportunities offered by the age of artificial intelligence. In this framework, an interdisciplinary research approach should be adopted to better understand the change of religious belief systems in the age of artificial intelligence. Sociologists, theologians, technologists, and ethicists should examine the social and religious implications of artificial intelligence in a multidimensional way and create an inclusive framework for understanding the effects of this transformation on society. As artificial intelligence reshapes the religious and ethical values of society, addressing the positive and negative reflections of these effects on individuals and communities will play a critical role in society's adaptation to this new era.

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Artificial Intelligence, Human and Society in the Context of Ulrich Beck's Risk Society Theory

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Abstract

The subject of this article is to discuss the cyclical effects of artificial intelligence (AI), a man-made technological system, on human, human consciousness and society. In light of risk society theory, the article's goal is to demonstrate how artificial intelligence, a technology created by humans, can control people and society and what kinds of problems it may pose. Examining the potential interconnections between an artificial entity and consciousness and a real entity (human/society) and consciousness is the article's primary issue. Methodologically, this study adopts descriptive approach. One of the most talked-about subjects in recent years is artificial intelligence, a technological system created by humans that seeks to comprehend how human intellect works and influences action. This technological system can create code, store large amounts of data and use algorithms to generate behavior and communicate in a manner similar to that of a human. AI technology is also capable of solving issues and carrying out a variety of human tasks. In this respect, it can be said that artificial intelligence acts as an artificial existence and consciousness. The theory of risk society, put forward by Ulrich Beck, in its most general definition, is that modern humans create various risks that will threaten their own existence with the knowledge, science and technology they produce. In other words, it means that man puts himself into a network of uncertainties and risks with what he produces in the cyclical world he lives in. Artificial entities and consciousness share the human ability to be a conscious entity, use reason, and generate ideas because artificial intelligence technology produces results that are almost identical to human intellect and consciousness. Although this situation seems to make human life easier, it may carry the risk of pacifying human qualities and devaluing people. Moreover, it can establish a kind of technological hegemony by putting people and societies under the control of technological devices. In line with these evaluations, the article first deals with risk society theory from a conceptual perspective. Then the relationship between technology, human and society is discussed. Finally, the framework of risk society theory is used to analyze the potential impacts of artificial intelligence technology on human life. According to the findings obtained from the article, artificial entity and consciousness based on artificial intelligence technology may blunt the ability to use human qualities and banalize many functions that make human entity special. Moreover, as an entity with reality on the axis of reasoning, thinking and producing solutions, artificial intelligence may fill the human field with the power of alternative and much faster analysis. As a result, it was understood in the study that the human-human relationship that shapes social life may evolve into a human-technology relationship in the future.

Keywords

Sociology of Religion, Society, Human, Technology, Artificial Intelligence, Artificial Entity, Risk Society Theory

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Ulrich Beck'in Risk Toplumu Kuramı Bağlamında Yapay Zeka, İnsan ve Toplum

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Öz

Bu makalenin konusu teknolojik bir sistem olan yapay zekanın döngüsel olarak insana, insani bilince ve topluma etkilerini tartışmaktır. Makalenin amacı insan ürünü teknoloji olarak yapay zekanın insanı ve toplumu nasıl tahakküm altına alabileceğini ve ne tür riskler yaratabileceğini risk toplumu kuramı bağlamında ortaya koymaktır. Makalenin ana problemi gerçekliğe sahip bir varlık (insan/toplum) ve bilinç ile yapay bir varlık (yapay zeka) ve bilinç arasındaki muhtemel etkileşimleri incelemektir. Makalede metodolojik açıdan betimleyici yaklaşım benimsenmiştir. Son yılların en popüler tartışma konularından birisi olan yapay zeka, insanın sahip olduğu zekâ yetisinin işleyişini ve insanı davranışa sevk edişini anlamaya çalışan insan ürünü teknolojik bir sistemdir. Bu teknolojik sistem yüksek kapasiteli veri depolama, kodlamalar yapma ve algoritmalar aracılığıyla hareket ederek insan gibi söylemde bulunma ve davranış üretme kapasitesine sahiptir. Yapay zeka teknolojisi problemlere çözüm üretme ve birçok insani işlevde bulunma pratiğine de sahiptir. Bu bakımdan yapay zekanın adeta yapay bir varlık ve bilinç şeklinde hareket ettiği söylenebilir. Ulrich Beck tarafından ortaya atılan risk toplumu kuramı ise en genel tanımıyla modern insanın kendi ürettiği bilgi, bilim ve teknik ile kendi yaşamsal alanına tehdit oluşturacak çeşitli riskler yaratmasıdır. Diğer bir ifadeyle insanın döngüsel olarak yaşadığı dünyada ürettikleri ile kendini bir tür belirsizlikler ve riskler ağının içerisine sokmasıdır. Yapay zeka teknolojisinin neredeyse insan zekasına ve bilincine benzer çıktılar sunması insana ait olan bilinçli varlık olma, akli kullanma ve düşünce üretme potansiyelinin yapay bir varlık ve bilinçle paylaşılması manası taşımaktadır. Bu durum insan yaşamını kolaylaştırıyor gibi görünse de insani vasıfları pasifleştirme ve insanı değersizleştirme riski taşıyabilir. Dahası insanı ve toplumları teknolojik aygıtların güdümü altına sokarak bir tür teknolojik hegemonya yaratabilir. Bu değerlendirmeler doğrultusunda makalede öncelikle risk toplumu kuramı ele alınmaktadır. Akabinde teknoloji, insan ve toplum ilişkisi tartışılmaktadır. Son olarak yapay zeka teknolojisinin insan ve toplum hayatında yaratabileceği etkiler risk toplumu kuramı çerçevesinde incelenmektedir. Makaleden elde edilen bulgulara göre yapay zeka teknolojisine dayalı yapay varlık ve bilinç insana ait vasıfları kullanabilme becerilerini köreltebilir ve insanı özel kılan birçok fonksiyonu sıradanlaştırabilir. Dahası akletme, düşünme ve çözüm üretme ekseninde gerçekliğe sahip bir varlık olarak insana ait alanı, alternatif ve çok daha hızlı çözümleme gücüyle yapay zeka doldurabilir. Sonuç olarak çalışmada toplumsal hayatı şekillendiren insan-insan ilişkisinin ilerleyen zamanda insan-teknoloji ilişkisine evrilebileceği anlaşılmıştır.

Anahtar Kelimeler

Din Sosyolojisi, Toplum, İnsan, Teknoloji, Yapay Zeka, Yapay Varlık, Risk Toplumu Kuramı

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Introduction

Technological innovations are included in human and social life with different versions every day. It goes without saying that the advent of technical advancements causes some changes in human existence. Every invention has the potential to influence people's social, cultural, or economic lives and influence them to adopt new ways of thinking, acting and living. At the same time, changes and advancements in technology have the potential to change how people interact with one another.¹ Since humans are social creatures, a lot of their needs are met through the connections they make with other people. In this way, the relationship between humans might be described as a need-based dependency relationship. On the other hand, today, the alienation of human beings from human beings and the individualization of human beings in their own world are emerging. The human entity, the focus of social life, has a tendency to grow more solitary and reclusive every day. Technological advancements are one of the elements that contribute to the process of human isolation and individualization. The process that started with the internet and computers has been reinforced by other developments in the virtual world and smartphones. This situation has paved the way for people to partially move away from real life and establish a closer relationship with the virtual world.² It has been noted that this process of development and transition has a greater impact on the younger generations in particular. In this regard, it is feasible to argue that contemporary technology advancements have a feature that separates people from one another and encourages reliance and personalization in terms of usage.³

AI is one of the most recent technical advancements that humanity has encountered. With its capacity for data storage, artificial intelligence technology has the ability to transfer information, produce ideas and provide answers. It can also memorize extensive volumes of data in any subject and analyze it in a methodical manner according to requirements. According to human demands, artificial intelligence appears to have a highly functional structure in this regard.⁴ AI technology has the potential to benefit people in a variety of areas, including education, health, culture, the arts, the economics and more. On the one hand, it can disrupt human relationships, but on the other, it can place human entity under the direction of technical advancements. In fact, in a world of increasing individualization, meeting one's needs through technological devices and dealing with artificial entity may reduce the need for human entity. Moreover, this transformation means that human functions are performed by an artificial being through the technological system. In this instance, the entity referred to as a person shares its distinct traits and distinctions with an artificial entity and consciousness. Therefore, the human-human relationship-based way of life runs the risk of becoming a human-technology relationship. The process by which modern man targets himself once more with his output is actually what Ulrich Beck refers to as the "risk society." Every new advancement that

¹ Ahmet Dağ, *Transhümanizm: İnsanın ve Dünyanın Dönüşümü*, (Ankara: Elis Yayınları, 2018).

² Eda Deligöz, *Sanal Dünya ve İnsan*, (İstanbul: Kitapyurdu Yayıncılık, 2020).

³ Mustafa Tekin & Muhammet Özdemir (ed.), *Transhümanizm & Posthümanizm: Disiplinlerarası Bir Çalışma*, (Ankara: Eskiyei Yayınları, 2021).

⁴ Hülya Özizer, "Yapay Zekanın Faydaları ve Zararları Üzerine Bir Değerlendirme", *Uluslararası Sosyal ve Beşeri Bilimler Araştırma Dergisi* 11/104 (2024), 343-344.

contemporary man brings about is done so without considering the risks that it may pose or may pose to his own life. With modernization, man opens the door to many new problems that he did not encounter in the past with the things he produces on the axis of science, technique and rationality. In other words, modern man puts himself into various risks with his own hand.⁵

This article attempts to analyze the possible future situations of the relationship between artificial intelligence, human beings and society within the framework of Ulrich Beck's risk society theory. The first step in this respect is a conceptual and theoretical discussion of the notion of risk society. It then focuses on how the future of existence and awareness can influence the connection between human, society and technology. Finally, the concept of risk society theory is used to explore how artificial intelligence affects people and society.

1. Theoretical Framework: Risk Society Theory

The concept of risk, which is derived from the French word "risque", means the danger of being harmed by anything. In other words, it is defined as the possibility of encountering unwanted or unexpected results. At the core of the concept of risk lies the inability to fully predict the future state of a decision made today.⁶ The 'risk society theory' created by German sociologist Ulrich Beck is largely of Western and European origin. The concept refers to a new social form that emerged with the reshaping of classical industrial society and within the continuity of modernity.⁷ Beck, the founder of the risk society thesis, claims that during the 18th century, modernity has eliminated the agricultural society, laying the structural groundwork for the industrial society. These days, modernization attacks itself by dismantling industrial society's underlying functioning underpinnings. Beck has attempted to comprehend civilizations using the ideas of risk society theory and "reflexive modernization," characterizing today's cultures as risk societies.⁸ He asserts that as a result of industrialization, communities are now confronted with issues that were not present in earlier eras. Our age should be viewed as a process of change, according to Beck. The risk society, which is distinct from the traditional industrial society and takes on a new form, can be characterized as both a new society created during the modernization process and a continuation of the industrial society.⁹

Ulrich Beck asserts that the idea of modernization helps us comprehend the idea of risk. Uncertainty and unpredictability issues have surfaced at the most advanced stage of modernization. Beck distinguishes today's risks from external risks such as poverty, drought, earthquake or health risks seen in previous ages, and sees them as scientific and advanced technological risks that are mostly man-made.¹⁰ He claims that these man-made hazards put all life on the planet at jeopardy and force us to deal with "unpredictability." The invisible consequences of what Beck refers to as the "shadow kingdom" include radiation and nuclear risks as well as technical advancements.¹¹ According to Beck, risk in the modern period

⁵ Ulrich Beck. *Risk Society: Towards a New Modernity*. (London: Sage Publications, 1992).

⁶ İzzet Gökhan Özbilgin. "Risk ve Risk Çeşitleri". *Türkiye Bilişim Dergisi* (2012), 88.

⁷ Ulrich Beck. *Risk Society and Beyond*. (London: Sage Publications, 2000), 212.

⁸ Ulrich Beck. *Reflexive Modernization*. (Cambridge: Polity Press, 1994).

⁹ Beck, a.g.e., (1992), 12-13.

¹⁰ Anthony Giddens. *Sosyoloji*, (İstanbul: Kırmızı Yayınları, 2012), 156-157.

¹¹ Beck, a.g.e., (1992), 55.

encompasses threats that are more focused on the future and will have an impact on it. He contends that the application of scientific, technological, social and economic breakthroughs and advancements in the course of industrial civilization without enough questioning has created risks for both individuals and society.

He argues that scientific and technological hazards have increased to a point where control organizations are unable to handle them due to the obsolescence of industrial modernity. In fact, in addition to the regular and comfortable life opportunities that technology and science bring to one part of the society, other societies, which have limited knowledge of all these developments, face similar risks. Mass risks, ecological risks, technology and industrial risks are the three main worldwide threats that societies confront today, according to Beck.¹² Therefore, Beck's risk society can also be defined as the transformation of industrial society into global dimensions.¹³ The risk society theory states that "manufactured uncertainties" are produced by the spread of information. In contrast to the enlightenment period, which was characterized by overconfidence in the power of reason, in the risk society, a growing distrust of the discourse of experts has become widespread among people.¹⁴ One unintentional or unexpected effect of modernity is the shift from the industrial to the risk period. A late modernization process that is oblivious to its own consequences and dangers is what led to the risk society. To put it another way, a risk society is an organized effort to combat the risks and anxieties brought forth by industrialization. The tension between those who profit from risk and those who are adversely impacted by it intensifies as the risk society grows. On the contrary class society, risk society is partially polarized due to differences between those who define risk and those who are impacted by it. Risk society unites people from many age groups, socioeconomic backgrounds and geographical locations.¹⁵

According to Beck, the critical issue in modernization and risk society is that societies have conscious action. Risks need to be correctly identified and consciously acted upon. At the heart of this so-called conscious modernization is a comprehensive self-criticism. On the other hand, he thinks that the people who consciously produce risks produced by individuals or institutions should also make self-criticism on their behalf. The ideas of knowledge and consciousness have emerged as a result of the uncertainties that come with dangers in industrial society. Beck stresses that an aware society should be established and that social life should be influenced in some way through the idea of "reflexive modernization." He also refers to reflexive modernization as "logic reform" because of this.¹⁶

2. Technology, Human and Society Relationship

There are some characteristics that distinguish living and non-living things in the world of existence. Human entities have a special place in the realm of existence with some of their characteristics. For example, features such as being able to think, analyze, reason and produce

¹² Shlomo Griner, "Living a World Risk Society: A Reply to Mikkel V. Rasmussen", *Journal of International Studies* 31/1 (2002), 150.

¹³ Beck, a.g.e., (1992), 35-36.

¹⁴ Beck, a.g.e., (2000), 216-218.

¹⁵ Engin Yıldırım, "Risk Toplumunda (Depremle) Yaşamak". *Akademik İncelemeler Dergisi* 3/1 (2008), 77.

¹⁶ Beck, a.g.e., (1994), 33.

solutions distinguish human entity from other entity. These features enable humans to have a variety of relationships with both living and non-living creatures in the natural world and to play a vital role in social interactions. Humans are social creatures who are constantly interacting with other humans and other creatures. Man's natural place in the universe is reflected in the relationships he forms with other humans, animals, plants and other inanimate objects. These interactions allow humans to fulfill their existential functions since they have a reality in the world of existence and an obvious consciousness.¹⁷ As a creature given the ability to reason and think, human entity have a key role in shaping the course of the world in which we live. In this respect, the interruption of human consciousness by various scientific and technological innovations may create some problems both in terms of the world order and the place of the human entity, who is the main element in this order. Humans are open to outside influences, curious about what is happening around them and seek to apply it to their own life. Human mind, behavior and lifestyle consequently reflect these elements.¹⁸

Today, there are many scientific and technological initiatives/innovations that question the place and potential of human entity in the realm of existence or aim to create tools that can be an alternative to human consciousness.¹⁹ For example, with artificial intelligence technology, an artificial entity and consciousness is being created as an alternative to human beings. On the other hand, with the transhumanism movement, it is aimed to increase the abilities of human beings to much higher levels through science and technology and to transform human existence into transhuman existence.²⁰ All of these efforts have the potential to alter the basic place of the human being in the universe. While there is a desire to push humans well beyond their physical and mental limits, there is also an attempt to create artificial creatures and consciousness as an alternative to human existence and consciousness. What role humans will play in the future after developments like artificial intelligence and transhumanism are complete is currently the first question that springs to mind. Will artificial intelligence and awareness, for instance, belittle human consciousness if they are faster and more sophisticated than the human mind? or will people become even more dependent on technology and succumb to the dominance of cutting-edge technical advancements such as artificial intelligence?

The relationship between technology and human beings is changing day by day. Every technological development gains meaning according to the way people use it. Technological innovations can produce positive outputs for humans as well as negative consequences. In the past, technological possibilities emerged on a human-directed plane and within the framework of human needs. However, there is currently a trend toward a more directing interaction between technology and people. As a result, technology advancements have had an impact on human nature on a social, cultural, biological and psychological level.²¹ AI research, for instance, is the most recent illustration of the high levels of technology available today. A new phase in

¹⁷ İhsan Fazlıoğlu. *Kendini Aramak*, (İstanbul: Ketebe Yayınları, 2020), 22-23.

¹⁸ Mark Twain. *İnsan Nedir?*, çev. Esra Damla İpekçi (İstanbul: Dadalus Kitap, 2019), 57-58.

¹⁹ Öykü İyigün & Mustafa K. Yılmaz. *Yapay Zeka*, (İstanbul: BETA Kitap, 2021) ; Henry A. Kissinger vdğr., *The Age of AI and Our Human Future*, (New York: Back Bay Books, 2022).

²⁰ Jean-Pierre Fillard. *Transhumanism: A Realistic Future*, (London: World Scientific Publishing, 2020).

²¹ Oğuzhan Atabek. "Teknolojinin Anlaşımının Gelişimi ve İnsan-Teknoloji İlişkisi", ed. Semra Kıranlı Güngör, *Eğitim Bilimleri Alanında Uluslararası Araştırmalar IV*, (Konya: Eğitim Yayınevi, 2021).

the interaction between humans and technology has begun with the potential for artificial intelligence technology to create a humanoid-scale artificial being and consciousness. Increased usage of technical advancements gives technology the ability to rule over people and human nature as a power unto itself.²² The preferably relationship between human beings and technology, which existed in line with human needs, is gradually can turn into a compulsory relationship in which human beings become dependent on technological innovations.²³

AI is a technical advancement that has gained popularity in recent years. Among technological advancements, artificial intelligence has a distinct connotation from others. In fact, no technological advancement to date has ever been able to mimic human physical characteristics in a comprehensive manner, think like a human, solve problems or offer recommendations. In this respect, artificial intelligence technology is more than just a technological innovation, it has a structure that largely embodies human characteristics and can fulfill many human functions. These characteristics all set artificial intelligence technology apart from previous technical advancements and create a unique niche for it. Many human traits, like thinking, reasoning and problem-solving, are absent from the interaction between humans and other technological devices.²⁴ To put it succinctly, others cannot possibly have an artificial life or consciousness. The majority of other technology advancements can be categorized as tools that help people in their daily lives. Artificial intelligence technology, on the other hand, has the quality of humanization based on artificial existence and consciousness, making it more than just a tool for humans. This circumstance could eventually result in a gap in our understanding of what it means to be human and where we truly fit into the world. For example, the fact that artificial intelligence technology performs many of the tasks that human beings overcome with their intellect, mind, knowledge and thinking ability through algorithms and much faster, may lead to a transformation in the world in the future that centers technology instead of human beings.²⁵ This situation may transform the social relationship that man has established with man as a social being into a technological relationship with artificial intelligence as a technical device.²⁶ Consequently, the alienation of man from man may become more pronounced.

3. Risk Society Theory, AI, Human and Society

Within the framework of risk society theory, the interactions between artificial intelligence and human beings are discussed under four headings below. We can list these titles as artificial intelligence and technological hegemony; artificial intelligence and reflexive modernization; artificial intelligence and unpredictability; artificial intelligence and manufactured uncertainty.

²² Feray Odman Çelikçapa, "Teknoloji ve İnsan", Uludağ Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi 13/1-2, (1992), 97.

²³ Hasan Kafalı, "Toplum ve Din Bağlamında Yapay Zeka", ed. Muhammed Kızılgeçit vdğr., *Yapay Zeka, Transhümanizm ve Din*, (Ankara: Diyanet İşleri Başkanlığı Yayınları, 2022), 87-90.

²⁴ Türkay Dereli. "Yapay Zeka ve İnsanlık" ed. Muzaffer Şeker vdğr., *Bilişim Teknolojileri ve İletişim: Birey ve Toplum Güvenliği*, (Ankara: TÜBA Yayınları, 2020), 121-124.

²⁵ Max Tegmark, *Yaşam 3.0: Yapay Zeka Çağında İnsan Olmak*, çev. Ekin Can Göksoy, (İstanbul: Pegasus Yayınları, 2021), 394-399.

²⁶ Mehmet Bulgen (ed.), *Yapay Zeka ve İslam*. (İstanbul: Timaş Akademi Yayınları, 2025).

3.1. Artificial Intelligence (AI) and Technological Hegemony

AI technology can code, store data, process data methodically and generate outcomes using algorithms. AI can meet many needs that exist in human or social life. It has the capacity to produce outputs in various fields such as working life, social and cultural life, health, education, finance and trade.²⁷ In this way, it is evident that artificial intelligence technology is influencing many aspects of people's daily lives. As a result, it can simulate human knowledge, reason and action. As a technical tool, artificial intelligence essentially mimics human behavior and displays human traits in a non-human entity. In the end, humans may eventually share with another person the circumstances that are given to them inside their own realm of freedom and that make them unique. Furthermore, the speed and ability of artificial intelligence technology to provide results instantly appear to surpass the capabilities of the human intellect.²⁸ As it is understood, a technological device produced by human hands exhibits humanoid characteristics and even exceeds human capacity.

Many theoretical and practical characteristics of human beings, including reason, thinking, action, and problem-solving, may be limited or placated by the diversity provided by artificial intelligence technology and the usefulness it brings to human life. It may become a probable situation that people who realize their wishes quickly through a technological device and facilitate their daily lives may substitute their lives with the control and guidance of technological devices over time. On the other hand, issues such as artificial intelligence's dependability and openness, its potential to prioritize human values, its ability to observe human and social interests, and its ability to have an accountability system all come to mind. According to Beck, among the threats that humanity has produced on its own, technical risks are the most significant in this regard. He claims that these hazards indicate a process that mankind creates with its own knowledge and inventiveness in order to continue the modernization and industrialization process and that humanity will bear the brunt of its effects. According to Beck's approach, it is not possible to identify the risks from today to tomorrow, and humanity will start to face the complexity it has fallen into at an unexpected moment.²⁹ In this context, for example, the risks of artificial intelligence in terms of security and privacy, its features that can render human beings meaningless and empty by introducing humanoid functions, and its aspects that can put human beings under the guidance of technology in terms of practicality and speed may emerge as potential risks in the future. Consequently, technical advancements like artificial intelligence have the potential to transcend beyond being a product of human knowledge and technology, and instead become a tool that surpasses human capabilities, so placing humans under hegemony.

²⁷ Mahmut Özer, *Yapay Zeka ve Toplum*, (Ankara: Nobel Yayıncılık, 2025); Mehmet Şahin & Cumali Yaşar, *Yapay Zeka Çağında Toplum, Ekonomi ve İşletmeler*, (Çanakkale: Holistence Publications, 2024); Shah, Priten. *Yapay Zeka ve Eğitimin Geleceği: Yapay Zeka Çağında Öğretim*, çev. Arzu Leman Orcan, (İstanbul: The Kitap Yayınları, 2024).

²⁸ James Barrat, *Son İcadımız: Yapay Zeka ve İnsanlık Çağının Sonu*, çev. Levent Tayla, (İstanbul: Pegasus Yayınları, 2020), 251-265.

²⁹ Beck, a.g.e., (1992), 55-56.

3.2. Artificial Intelligence (AI) and Reflexive Modernization

The goal of the modernization process was to create a completely new world from a technical, scientific and rational standpoint. Artificial intelligence is one example that has been provided to humanity recently as a result of scientific and technological endeavors. AI can be applied in a wide range of industries, including finance, trade, health, education, culture and the arts. It has the potential to provide a multitude of opportunities for human and societal life. In this approach, AI has the potential to impact every aspect of social life. For this reason, artificial intelligence has a big influence on people's daily lives, a balanced system is needed to maintain the relationship between humans and artificial intelligence. How artificial intelligence should be used, its practical applications, its risky aspects, its security and privacy implications, the advantages and disadvantages of artificial intelligence for humans and how human reality and consciousness relate to artificial existence and consciousness impact people and societies are just a few of the many issues surrounding artificial intelligence.

One of the most crucial concerns in the risk society, according to Beck, is raising social and human awareness of the dangers that modern man faces as well as the new inventions that are being developed. This process, which Beck refers to as reflexive modernization, entails a resurgence of social consciousness and a rethinking of the potential issues that people are or may encounter.³⁰ Therefore, it aims to reduce the dangers that societies face when confronted with the opportunities brought about by the logical, scientific and technical components of modernization. Both positive and bad aspects of artificial intelligence technology affect humans. For example, data security, privacy of personal life, security of social and commercial life can be counted among these. Therefore, the relationship between artificial intelligence, human and society should proceed on the basis of a secure, transparent and responsible understanding. This requires a process in which social and individual awareness of the use and control of artificial intelligence will be raised and a high level of consciousness will be achieved.

In essence, what Beck refers to as reflexive modernization is stepping in to disrupt social life when dangers arise. He seeks to depict the complex condition that industrialization has brought people and societies to, even though he believes that society should be made more aware of risk concerns. Beck wants the modernizing process to be accounted for holistically by humanity.³¹ The modernization and industrialization process has resulted in the emergence of artificial intelligence, which is at the forefront of scientific and technological advancements today. In this sense, a number of social and economic advancements, including the reconstruction of social life, the division of labor, the design of working life and the discovery of new professions, may arise within the framework of artificial intelligence technology. Reflective modernization highlights the degree of human consciousness required for the methodical and rational development of social life in the face of the hazards created today, despite all these potential activities.

³⁰ Beck, a.g.e., (1994), 33.

³¹ Beck, a.g.e., (1994), 34-35.

3.3. Artificial Intelligence (AI) and Unpredictability

AI technology is used in various fields such as education, health, commerce, science, banking and finance. Moreover, artificial intelligence fulfills many of the human functions. Artificial intelligence technology has started to produce most of the activities that human beings build with their physical and intellectual strength.³² This circumstance could potentially passivate many of the human skills in terrestrial life in the future. As a result, there may be some disruption in the meaning that humans have in the material world. For instance, the work of a doctor and teacher, the knowledge and research of a scientist, the investment advice of a banker or financier, the fatwa or sermon service of a religious official and the teaching activity of an educator may all be automated by artificial intelligence technologies. In this respect, it is unpredictable how and in what direction artificial intelligence will affect many professions in the future.

On the other hand, the field study conducted by Çağal and Keskin to determine the possible risks that artificial intelligence may produce also points to various unpredictabilities in the future. Consequently, risks related to individual, social, technological, and professional life were identified, including those related to dependability and security, use in service areas, surpassing human capabilities, surveillance and control, memory loss and intelligence atrophy, planning and practical skills, technological dependency, employment loss, adverse effects on human relations, and malicious use. The research's conclusion is that the fact that artificial intelligence possesses human traits through algorithms and displays many human traits could lead to issues and hazards that are extremely challenging for civilizations to manage and coordinate in the future.³³ However, another study by Liu aims to determine the risks associated with artificial intelligence technology as well as how safe it can be for people and society. Therefore, artificial intelligence technology creates a more complex, unpredictable, and insecure environment rather than more practical, transparent, and predictable results in human and social life.³⁴

The situation Beck defines as unpredictability in the risk society essentially overlaps with the possible problems that artificial intelligence technology will produce. AI, developed in the modern world with the help of science and technology, means that a man-made machine can produce human-like outputs. Nevertheless, there is still uncertainty regarding the precise role artificial intelligence will play in human and societal life as well as the tasks it will do. Moreover, the possible risks and ethical problems that artificial intelligence will carry for human beings and society come to the fore in research.³⁵ The fact that artificial intelligence can accomplish many cognitive tasks that humans can complete raises questions about how humans will be positioned in the future, even though the subject of how much artificial intelligence can be regulated and employed appropriately has not yet been fully addressed. It appears that Beck's assessment in the idea of risk society that contemporary man is eventually aiming his

³² Yoricks Wilks, *Artificial Intelligence: Modern Magic or Dangerous Future*, (London: Icon Books, 2019).

³³ Meltem Toksoy Çağal & Yahya Mustafa Keskin, "Yapay Zeka ve Robot Teknolojisine Yönelik Risk Algısı Üzerine Nitel Bir Çalışma", *Hacettepe Üniversitesi Edebiyat Fakültesi Dergisi* 40/2 (2023), 583-593.

³⁴ Bingjie Liu, "In AI We Trust? Effects of Agency Locus and Transparency on Uncertainty Reduction in Human-AI Interaction", *Journal of Computer-Mediated Communication* 26 (2021), 384-402.

³⁵ Arslan Topakkaya & Yağmur Eyibaş, "Yapay Zeka ve Etik İlişkisi", *Felsefe Dünyası Dergisi* 70 (2019), 81-99.

purposefully produced things toward himself is valid at this time.³⁶ As far as we can see, the fact that artificial intelligence technology works more comprehensively and capably than human characteristics may draw restrictive limits on human beings in the future. Moreover, the determination of these limits may be realized through artificial intelligence technology rather than human consciousness and choice.

3.4. Artificial Intelligence (AI) and Manufactured Uncertainty

AI is undoubtedly a joint output of scientific knowledge and technological developments. The scientific knowledge and technical possibilities produced by the human mind ultimately become tools used by human existence. Numerous scientific and technological advancements have been incorporated into human and social life as a result of the industrial revolution and the modernization process. Humans have created advances in a wide range of disciplines, including media, culture, health, education, and the arts, using reason, science and technique. The products of human knowledge and experience include computers, smartphones, televisions, the internet and more.³⁷ However, the question of whether every new invention made possible by science and technical expertise has found its rightful place in human and social life comes up. Stated differently, it is also possible to question if every new invention has improved the organization and system of social life. Numerous innovations in human life have undoubtedly been brought about by the expansion of scientific knowledge and the growth of technological potential. Nevertheless, it has not been thoroughly investigated which human or societal. On the other part, the question arises as to whether every new thing produced through science and technical skills has been used in its proper place in human and social life. In other words, one can also ask whether each new invention has made social life more systematic and organized. The increase in scientific knowledge and the development of technological possibilities have certainly brought many innovations to human life. The requirements of people or society that are satisfied or will be satisfied by everything created, however, have not been thoroughly investigated. These days, the network of issues is rising in tandem with the limits of human knowledge. For instance, human-made innovations based on information and technology such as smartphones, internet, computers or social media are leading the way in psychological and social problems.³⁸ In actuality, a number of issues occur when people use these spaces frequently. Addiction, mental anguish and loneliness, anxiety and sadness, virtual world imitation, brainwashing and deteriorating family ties are a few examples. These online platforms may also lead to an increase in hate crimes, such as Islamophobia.³⁹

Among the innovations that Beck characterizes as manufactured uncertainty, the above can be mentioned, as well as artificial intelligence as an actual subject. Because artificial intelligence has been developed by experts in this field through scientific and technological

³⁶ Beck, a.g.e., (1994), 30-32.

³⁷ Yasin Bulduklu & Muzaffer Şeker, "Yeni Medya ve Değişen Toplumsal Değerler", ed. Muzaffer Şeker vdğr., *Bilişim Teknolojileri ve İletişim: Birey ve Toplum Güvenliği*, (Ankara: TÜBA Yayınları, 2020), 287-288.

³⁸ Mehmet Büyükkorak & Mehmet Dinç, "Sosyal Medyanın Aşırı Kullanımının Psikolojik Etkileri ve Türk Gençlerinin Sosyal Medyayı Kullanım Özellikleri", *Psikoloji Araştırmaları Dergisi* 1/1 (2020), 31.

³⁹ Durali Karacan, "Islamophobia and Values in Western Societies: An Analysis of the Impacts on Muslim Men of Islamophobic Attacks in the UK", *Değerler Eğitimi Dergisi* 21/46, (2023), 425-449.

knowledge.⁴⁰ However, there are still questions regarding how artificial intelligence may affect social and human life. For instance, the precise impact of artificial intelligence on human economic, social and personal security is still unknown. Similar to this, it's yet uncertain how many aspects of human nature—like reasoning, applying intelligence, and coming up with ideas and solutions—will be impacted by artificial intelligence. On the one side, this circumstance causes confusion regarding artificial intelligence technology and on the other, it erodes confidence in those who develop these technologies. Every new discovery is typically expected to make society and human existence a little more practical, safe and tranquil. In addition, it aims to provide a sterile existence in contrast to the past and free society from disorderly circumstances.

Various problems/risks that artificial intelligence technology can produce in social life are listed according to its intended use. These include transparency of artificial intelligence, reliability and confidentiality of data, malicious uses of artificial intelligence, physical copying of human beings with artificial intelligence, artificial intelligence producing human-like ideas and suggestions.⁴¹ As part of the late modernization process, all of these presumptions could put our globe at even greater risk. Furthermore, these processes are created by humans and manifest as worldwide issues with human repercussions. In the end, psychological and social issues like heightened risks to one's social and personal life, a decline in trust and an increase in worry and fear may worsen in the future.

Conclusion

This study examines the relationship between artificial intelligence, human and society within the framework of risk society theory. According to the results obtained from the study, the evolution of technology and human/society relationship has taken a course in which technology has started to dominate the world more. On the personal and societal axis, a lifestyle centered around technology has begun to take shape. The industrial revolution and the fast diffusion of technology advancements into human life intensified the process of drastic transformation that began with global modernization. Humans have become contradictory in the current state of society brought about by industrialization and modernization. Because humans have advanced to a point where they can target themselves with the things they create in the world and beyond their own ability for self-control. AI technologies are a modern illustration of this.

Ulrich Beck explained the situation where human beings put themselves in the position of being affected by the knowledge and experience they produce with the theory of risk society. In this regard, it has been observed that humans confront a variety of hazards and threats from their own scientific and technological endeavors as well as from their own potential circumstances, when taking into account the potential scenarios that artificial intelligence may bring to human and societal life. A state of uncertainty has been indicated by the changes that artificial intelligence will bring about in people's personal, social, and economic lives. In fact, so

⁴⁰ Beck, a.g.e., (2000), 216-217.

⁴¹ Nick Bostrom, *Süper Zeka: Yapay Zeka Uygulamaları, Tehlikeler ve Stratejiler*, çev. Ferit Burak Aydar, (İstanbul: Koç Üniversitesi Yayınları, 2019).

many problems remain unanswered, including how artificial intelligence will be used, managed, how its dependability and secrecy will be guaranteed, how its transparency will be established and how its destructive uses will be avoided. This situation also brings to mind Beck's concept of manufactured uncertainty. AI, which is produced by experts in the field with scientific knowledge and technological possibilities, still has various uncertainties and creates serious confusion among people.

However, the study also found that artificial intelligence poses a risk of establishing technological hegemony. AI has the potential to solve many problems and offer solutions, but it also poses a risk that humans, who are capable of reasoning and thought, would become passive and rely on artificial intelligence to meet the majority of their demands. Consequently, it could dull many of the qualities that give people meaning, such as using their intellect, assessing their intelligence, reasoning, coming up with solutions, coming up with ideas and lending a helping hand to others. AI has the potential to place humanity in a state of technological captivity by encouraging a more prefabricated and relaxed approach. In essence, this circumstance highlights what Beck refers to in his risk society theory as reflexive modernization. Specifically, human productions in the modern world pose additional risks to their lives. Therefore, in the 21st century, humanity should think comprehensively and exhibit approaches with a high level of consciousness in the face of the modernization process and many new developments that are its continuation.

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Interaction of Artificial Intelligence with Religions

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Abstract

Artificial Intelligence can be seen as “magic door” discovered in modern times. Like every magic door in the stories, this door sometimes offers beauty to those who open it, while sometimes it has the power to lead to darkness. In addition to facilitating the lives of human beings, there is a need for studies on Artificial Intelligence in order to prevent possible disasters. In this study, the relationship between Artificial Intelligence and the phenomenon of religion is examined through literature review method. Studies on Artificial Intelligence and religion are of critical importance in order to ensure that the religions, which people continue to uphold their lives in the understanding of individualism imposed under the hegemony of the modern time and the capitalist world, are not damaged in the age of Artificial Intelligence technology. The relationship between religions, clergy and religious individuals and Artificial Intelligence will affect the integration of Artificial Intelligence into daily life. For individuals who feel that they belong to any religion, Artificial Intelligence is an invention that facilitates religious life in many areas such as the relationship between them and their co-religionists, worship, visits to holy places, donations, translation of religious texts into different languages, issuing fatwas, religious education, halal food, religious and spiritual coaching and many more. In addition, religious visuals and religious music produced by Artificial Intelligence offer an innovative understanding of religion. These are all possibilities that Artificial Intelligence offers to religions. However, Artificial Intelligence programs also benefit from religious texts and religious teachings while imitating humans due to their dualistic structure. There are also worrying possibilities such as discrimination in line with the instructions of the individuals who develop Artificial Intelligence, emphasizing a single religion, moving away from the original source in religious interpretations, or eliminating religions by increasing religious suspicion. This study, on the other hand, deals with current studies conducted from 2018 to the present day by using the literature review method, which is one of the qualitative research methods. The information obtained as a result of the research was compared and synthesis and analysis were made together with similar and different aspects. In the study, the phrase "Artificial Intelligence and Religion" will be searched in Google Scholar and ResearchGate databases and the information in the country's literature and world literature will be listed. All this information is important for religions to adapt to the new world order on the history page. It provides significant information for religious individuals to use Artificial Intelligence technologies peacefully by eliminating their concerns without falling behind the Artificial Intelligence technology age. This study is designed to create a roadmap on how Artificial Intelligence technology sciences as well as Religious Sciences can develop Artificial Intelligence according to the use of religion and religious individuals. In the results of the studies, it was seen that there is a polarization of positive and negative views on the use of Artificial Intelligence in religion. In order for Artificial Intelligence programs, which have started to be used today, to be used in religion, they need to be developed in areas such as mastery of the language of religion and access to information from reliable sources. Interdisciplinary studies of Religious Sciences are needed in order for religions to be carried to the new world order brought by technology. It is anticipated that the good or bad outcome of religion's Artificial Intelligence will be affected by its believers, and Religious Advisory Boards have a role to play. It is concluded that ethically designed national and international legal legislation should be prepared

urgently so that people can use Artificial Intelligence technologies in their religion and spirituality by protecting their personal rights.

Keywords

Psychology of Religion, Technology, Artificial Intelligence, Artificial Intelligence Anxiety, Literature Review

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Öz

Yapay Zeka modern zamanlarda keşfedilen sihirli kapıdır. Öykülerde yer alan her sihirli kapı gibi bu kapı da, kimi zaman kapıyı aralayanlara güzellikler sunarken kimi zaman ise karanlıklara sevk etme gücüne sahiptir. İnsanoğlunun yaşantısını kolaylaştırmasının yanı sıra yaşanabilecek felaketlerin önlenmesi için Yapay Zekâ hakkında çalışmalara ihtiyaç duyulmaktadır. Bu çalışma da ise Yapay Zekânın din olgusu ile olan ilişkisi literatür taraması yöntemi ile incelenmiştir. Modern zamanın ve kapitalist dünyanın hegemonyası altında dayatılan bireysellik anlayışıyla insanların yaşamlarını sürdürdükleri dinlerin, Yapay Zeka teknolojisi çağında zarar görmemesi için Yapay Zeka ve din konusunda yapılacak çalışmalar kritik öneme sahiptir. Dinlerin, din adamlarının ve dindar bireylerin Yapay Zekâ ile ilişkisi bir açıdan Yapay Zekânın günlük hayata entegrasyonunu etkileyecektir. Herhangi bir dine kendini ait hisseden birey için diğer dindaşları ile arasındaki ilişki, ibadetleri, kutsal mekân ziyaretleri, başlıları, dini metinlerin farklı dillere çevrilmesi, fetva verebilmesi, din eğitimi, helal gıda ile beslenmesi, dini ve manevi coğu ve daha birçok alanda Yapay Zekâ dini yaşamı kolaylaştıran bir icattır. Ayrıca Yapay Zekânın ürettiği dini görseller, dini musikiler yenilikçi bir din anlayışı sunmaktadır. Tüm bunlar Yapay Zekânın dinlere sunduğu olanaklardır. Ancak Yapay Zekâ programları da düalistik yapısı sebebiyle insanı taklit ederken dini metinlerden, dini öğretilerden faydalanmaktadır. Yapay Zekâyı geliştiren bireylerin talimatları doğrultusunda ayrımcılık yapması, tek bir dini öne çıkarması, dini yorumlamalarda orijinal kaynaktan uzaklaşması ya da dini şüpheyi artırarak dinleri ortadan kaldırması gibi endişeye sevk eden ihtimaller de mevcuttur. Bu çalışma ise nitel araştırma yöntemlerinden literatür taraması yöntemi kullanılarak 2018 yılından günümüze değin yapılan güncel çalışmaları ele almaktadır. Araştırma neticelerinde elde edilen bilgiler kıyaslama yapılarak benzer ve farklı yönlerle beraber sentez ve analiz yapılmıştır. Çalışmada Google Scholar ve ResearchGate veritabanlarında “Yapay Zekâ ve Din” ibaresi taranarak ülke literatürü ve dünya literatüründe yer alan bilgiler sıralanacaktır. Tüm bu bilgiler dinlerin tarih sayfasında yenedünya düzenine sağlıklı uyum sağlamaları için önem arz etmektedir. Dindar bireylerin ise Yapay Zekâ teknoloji çağından geri kalmadan, endişeleri giderilerek huzurla Yapay Zekâ teknolojilerini kullanmaları için kayda değer bilgiler sunulmaktadır. Yapılan çalışma; Din Bilimleri kadar Yapay Zekâ teknoloji bilimlerinin de din ve dindar bireylerin kullanımına göre Yapay Zekâyı nasıl geliştirebilecekleri hakkında yol haritası oluşturmak için tasarlanmıştır. Çalışmaların sonuçlarında dinde Yapay Zekâ kullanımına yönelik olumlu ve olumsuz görüşlerin kutuplaşmasının mevcut olduğu görülmüştür. Günümüzde kullanımı başlayan Yapay Zekâ programlarının din konusunda kullanılabilmesi için din diline hakimiyet, güvenilir kaynaktan bilgi ulaşımı gibi alanlarda geliştirilmeleri gerekliliği öne çıkmıştır. Teknolojinin getirdiği yeni dünya düzenine dinlerin taşınabilmesi için Din Bilimlerinin disiplinler arası çalışmalarına ihtiyaç duyulmaktadır. Dinin Yapay Zekâyı iyi ya da kötü nitelendirmesinin inanları etkileyeceği öngörülmekte Din İstişare Kurullarına görev düşmektedir. İnsanların kişisel haklarını koruyarak din ve maneviyatlarında Yapay Zeka teknolojilerini kullanabilmeleri için etik olarak tasarlanan ulusal ve uluslararası yasal mevzuatın acil hazırlanması gerektiği sonucuna ulaşılmıştır.

Anahtar Kelimeler

Din Psikolojisi, Teknoloji, Yapay Zeka, Yapay Zeka Kaygısı, Literatür Taraması

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Introduction

Artificial Intelligence is cognition-like activities that can be generated and developed for devices.¹ Deep learning is the ability of a computer to recognize, process and replicate computational processes in depth, similar to humanoid cognition.² The development of Artificial Intelligence and deep learning should be evaluated in terms of human history. In this respect, examining the subject of “Artificial Intelligence and Religion” with its pros and cons has a critical importance for the discipline of Psychology of Religion.

Humanity has not given up on the phenomenon of religion until today, and continues to experience religion and spirituality through change and transformation.³ The universal phenomenon of religion is a discipline that surrounds human beings internally and externally and directs their thoughts, feelings and behaviors.⁴ Considering that people expect to find reward or punishment in return for their obedience and shape their lives according to these criteria, it is an important issue whether people will use Artificial Intelligence in religious phenomena. Which individuals with which characteristics are reactive to the use of Artificial Intelligence in religion or which people consider it safe to use Artificial Intelligence in their religions will determine the integration process of Artificial Intelligence into today's religious life. People's use of Artificial Intelligence in their religions is expected to increase the use of Artificial Intelligence by creating a threshold in other areas of life. As religion and spirituality will affect the shaping of Artificial Intelligence, Artificial Intelligence technologies will shape today's perception of religion and religious life. The relationship between Artificial Intelligence and religion goes both ways. Therefore, scientific research is needed before using religion and spirituality in Artificial Intelligence technologies.

It is predicted that machines that perform deep learning with Artificial Intelligence will take part in most of our daily lives. The use of Artificial Intelligence by religious institutions in the teaching of religious knowledge, in the practices of religious rituals, in the formation of religious communities will affect the use of people of that religion in their religious and spiritual lives. For this reason, studies examining the views of existing ancient religions and members of religions on Artificial Intelligence can give direction to Artificial Intelligence technology.

This research was undertaken to address the need for a literature study that summarizes studies with up-to-date information on “Artificial Intelligence and Religion” and compiles warnings and recommendations while Artificial Intelligence companies are presenting a new technology they develop every day. The study provides important information on how Artificial Intelligence is perceived in religious fields in an age when modern technologies are rapidly integrated into many areas of social life. The use of Artificial Intelligence in religious practices may bring many innovations, such as using AI-powered assistants instead of seeking guidance from religious sources and clergy. For this reason, individuals who belong to a religion have

¹ Ali Orhan Aydın, *Yapay Zekâ: Bütünleşik Biliş Doğru* (İstanbul: İstanbul Gelisim University Publications, 2013), 9.

² Çetin Elmas, *Yapay Zekâ Uygulamaları* (Ankara: Seçkin Publishing, 2007), 21.

³ Hasan Kafalı, “Toplum ve Din Bağlamında Yapay Zekâ”, *Yapay Zekâ Transhümanizm ve Din*, Ed. Muhammed Kızılgöçer et al. (Ankara: Publications of the Presidency of Religious Affairs, 2021), 101.

⁴ Raşit Küçük, “Din”, *Turkish Religious Foundation Encyclopedia of Islam* (Accessed December 9, 2024).

concerns, hopes or reservations about the use of Artificial Intelligence. The data to be obtained as a result of the research will help us understand the reasons for social acceptance or rejection of Artificial Intelligence in the religious field. The research examines the studies accessed since 2018 by searching the phrase “Artificial Intelligence and Religion” in ResearchGate and Google Scholar databases. It is a guide for Religious Sciences and Artificial Intelligence Engineering and Artificial Intelligence Companies, which shows which issues to be treated sensitively regarding religion and Artificial Intelligence by bringing together the information obtained through literature review. While it is a guide on how to develop Artificial Intelligence-supported religious applications by protecting people's religious sensitivities, it is also a guide on what can be done to ensure that religion and religious people are not distanced from Artificial Intelligence technology. The study aims to provide an important perspective on how the relationship between technology and religion will be shaped not only in Turkey but also on the international platform.

1. Research Methodology

Literature review, one of the qualitative research types, was applied in the study. Literature review is a research technique that compiles the information obtained by systematically examining the existing academic study data on a specific issue with the techniques of analysis and synthesis.⁵ In the perspective of the field of psychology of religion, ResearchGate and Google Scholar databases were searched with the phrase “Artificial Intelligence and Religion” and the studies on the relevant subject were examined and the study was compiled to create meaningful inferences. Research Gate allows researchers to directly access national or international publications. Google Academy scans various studies on a topic and lists the links. For this reason, Google Academy and Research Gate search engines were preferred to find national and international publications on “Artificial Intelligence and Religion” in the study. In the study, researches published in national and international journals, conferences, books and book chapters, theses and dissertations and internet pages were included. According to the scan conducted in October and November 2025, only the Psychology of Religion studies on Artificial Intelligence and Religion were included in the study. In total; 43 articles, 7 international conferences, 3 theses, 3 web pages and 8 book information were compiled. In the entire study, 72 sources were cited.

2. Studies on Artificial Intelligence and Religion

2.1. Possible Benefits of Artificial Intelligence for Religion and Religious People

Artificial Intelligence and religion have a bidirectional relationship. There are studies in the literature that argue that religions use Artificial Intelligence as much as Artificial Intelligence is produced by utilizing religions. For example, it is claimed that the phenomenon of mindfulness, that is, mindfulness and consciousness in Buddhism, is an example for Artificial Intelligence.⁶ Similarly, as a result of the study conducted in our country, it was seen that people believe that

⁵ John W. Creswell, *Araştırma Deseni: Nitel, Nicel ve Karma Yöntem Yaklaşımları*, Trc. Sulçuk Beşir Demir (Ankara: Siyasal Bookstore, 2018), 37.

⁶ Tan, Chai C., Buddhist-Spirituality Foundation for Artificial Intelligence Applications through Consciousness Subjects, *ASEAN Journal of Religious and Cultural Research* 5/2 (2022), 1-10.

Artificial Intelligence technology is also the work of God, that technology progresses as God creates the universe in the best way that can be known, and that they explain Artificial Intelligence with the "Conception of God".⁷ This perspective aligns with the thesis that scientific discoveries inspire admiration. Therefore, Artificial Intelligence will strengthen the perception of "God".⁸

Religions survive with their followers. All religions have collective rituals. The moments when religious and cultural phenomena come together, such as weddings, funerals, festivals, times of worship and holy places make it obligatory for believers of the same religion to worship together. The Internet allows people to see the individual living on the other side of the world more than their next-door neighbor. Thus, the internet helps citizens of the world who belong to the same religion to perform religious rituals and worship on virtual platforms.⁹ Today, Artificial Intelligence applications can gain sanctity with this aspect. The existence of virtual churches, the presence of many religious organizations, especially Islam, Christianity, Judaism, Hinduism and Buddhism in the Second Life application, and the Muslim female avatars depicted with headscarves in Megaverse show people's efforts to spread their religion and spirituality in the virtual world.¹⁰ As can be seen, both the phenomenon of religion benefits from technological developments and technological developments produce products on the subject of religion.

Airplane transportation makes the world smaller and people are interested in traveling around the world. However, the issue of haram and halal food, which is another element of religions, leaves believers in a difficult situation. Wenan and his colleagues have developed an Artificial Intelligence application to make it easier for people to decide which food they can eat in a restaurant.¹¹ In Bangladesh, a mobile application called "Bestow" facilitates religious donation, while "Thangka Oriented Gradient Histogram (HOG)" and "Support Vector Machine (SVM)" applications facilitate the recognition of religious images and symbols.¹² Artificial Intelligence also offers the opportunity to redesign religious motifs and patterns.¹³ Not only visually, but also religious music is gaining a new breath with Artificial Intelligence technology.¹⁴ An Artificial Intelligence program to predict religious extremist groups in Sri Lanka and an

⁷ Hurşit Erbek, *Yapay Zekâ ile İlgili İddiaların Tanrı Tasavvurları Açısından Değerlendirilmesi* (Van: Van Yüzüncü Yıl University, Institute of Social Sciences, Master's Thesis, 2024), 133.

⁸ Joyce Ann Konigsburg, "Scientific Wonder, Artificial Intelligence, and Awe of the Divine", *Religions* 15/4 (2024), 442.

⁹ Marina V. Fedorova-Mira B. Rotanova, "Professional Communication Strategies of Religious Organizations in Modern Digital Society", *Workshop on Communication Strategies in Digital Society (ComSDS)*, 18-21, Russia: IEEE, 2019.

¹⁰ Marlyn Tadtros, "E-Hijab: Muslim Women in The Metaverse", *International Journal of Learning and Media* 2/2-3(2010), 45-61; Yuliana Khong, "Spiritual Utopia in The Virtual Space: Living a Second Life in Paradise", Accessed 10/12/2024.

¹¹ Wenan, Tan etc., "Digital Reference Model System for Faith Tourism and Safety", *7th International Conference on Engineering Technologies and Applied Sciences (ICETAS)*, 1-6, Malaysia: IEEE, 2020.

¹² Farhat Lamia Barsha - Zarin Tasneem, "Bestow: A Location-based Mobile Application for Religious Donors in Context of Bangladesh", *International WIE Conference on Electrical and Computer Engineering (WIECON-ECE)*, 1-4, India: IEEE, 2019; Yuhong Chen - Xiaojing Liu, "Thangka Religious Tools Classification and Detection Based on HOG+ SVM", *3rd Advanced Information Management, Communicates, Electronic and Automation Control Conference (IMCEC)*, 967-971, China: IEEE, 2019.

¹³ Dilara Zeynep Gürer- İnci Zaim Gökbay, "Hat Sanatı Eserlerinin Yapay Zekâ Algoritmaları ile Analizi", *The Journal of Social Sciences* 64/64 (2023), 466-486

¹⁴ Hasan Kamil Genç, *Yapay Zekânın Müzikal Yaratıcılığı: Chat GPT Örneği*, (İstanbul: Marmara University, Institute of Social Sciences, Master's Thesis, 2024), 81-82.

Artificial Intelligence application that automatically scans and detects religious hate speech on Arabic Twitter also serve religions.¹⁵

Integrating Artificial Intelligence with Religious Education is another important issue. Especially question and answer opportunities and visual content are factors that facilitate teaching in every age group. In Aktay's research, it was determined that "images created by Artificial Intelligence have a high potential to be used for educational purposes".¹⁶ As in every subject, Artificial Intelligence programs in religious education also increase the quality of education.¹⁷

The Holy Qur'an is an Arabic book and even in today's Arab geography, the texts cannot be understood due to the transformation of the language over time. Similarly, the Bible is an Aramaic book. As such, members of religions who want to learn about religion have difficulty in understanding their holy books. Artificial Intelligence programs, especially in language translation with deep learning, are an important tool that can be used to help people better understand the messages of their holy books.¹⁸ However, these advantages should not guarantee the interpretation of religious texts.

The idea that Artificial Intelligence can help individuals learn about their personal religion, avoid mistakes and live religiously is also valued in society. The "Siri" application, which makes iPhone phones attractive, shows that Artificial Intelligence technologies such as Open AI are moving towards the development of personal assistant features.¹⁹ Many movies (Her, Ex Machina, etc.) have been made on this subject. It is thought that Artificial Intelligence assistants will be useful for living daily life with rules and that people will be able to behave more morally with this technology.²⁰ In a study conducted on evangelical and Pentecostal church members, they had a positive view of Artificial Intelligence both because it facilitates the spread of their religion and because it allows them to follow religious teachings moment by moment, devote themselves and connect with the sacred.²¹ It can be said that the use of robots in religion has begun. In a study conducted in Turkey, as a result of the analysis of comments on Buddhist Monk

¹⁵ Aneesha Fernando-Thareendra Keerthi Wijayasiriwardhane, "Identifying Religious Extremism-Based Threats in SriLanka Using Bilingual Social Media Intelligence", *International Research Conference on Smart Computing and Systems Engineering (SCSE)*, (Sri Lanka: IEEE, 2020), 103-110; Nuha Albadi vd., "Are They Our Brothers? Analysis and Detection of Religious Hate Speech in the Arabic Twittersphere", *International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, (İspanya: IEEE, 2018), 69-76.

¹⁶ Sayım Aktay, "The Usability of Images Generated by Artificial Intelligence (AI) in Education", *International Technology and Education Journal* 6/2 (2022), 51-62.

¹⁷ Yakup Kaya - Elif Eliyatkin, "Din Eğitiminde İçerik Oluşturma ve Kişiselleştirilmiş Öğrenme Aracı Olarak Chat GPT ", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024): 616; SümeYra Arıcan, "Din Kültürü ve Ahlak Bilgisi Derslerinde Yapay Zekâ Destekli Modern Öğretim Yaklaşımları", *Journal of Religious Sciences Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 574.

¹⁸ Osman Kamil Çorbacı, "İlahi Hitaptan Makine Diline: Kutsal Metinlerin Yapay Zekâ ile Yeniden Okunması", *Journal of Religious Sciences Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 542.

¹⁹ OPEN AI, "Open AI", Accessed December 9, 2024.

²⁰ Moira Mc Queen, "Sparkling Religious Conversion through AI?", *Religions* 13/5 (2022), 413.

²¹ Alexandra La Cruz-Fernando Mora, "Researching Artificial Intelligence Applications in Evangelical and Pentecostal/Charismatic Churches: Purity, Bible, and Mission as Driving Forces", *Religions* 15/2 (2024), 234.

Mindar's youtube videos, feelings of admiration, anxiety, positive and negative attitudes were found. In Turkish comments, comments criticizing the current religious services and supporting the use of robots in religion were prominent.²² This data signals that Artificial Intelligence and robot technologies and religious transformation are close, especially in Turkey.

All the teachings of the religions in history are being transferred first to books, then to E-Books and internet pages, and now to Artificial Intelligence. It is obvious that the religious official does not have the opportunity to synthesize and interpret all the sub-elements of his own religion. Artificial Intelligence, on the other hand, collects countless information in one hand, explains similarities and differences instantly, and can interpret from different perspectives, showing that it is more pragmatic than a human being today. However, this should first be tested in line with the available information. For example, it was seen that the Artificial Intelligence program *Emma*, which was given the task of classifying Old Testament texts as those transmitted by St. Paul in line with the available data, can be used to classify big data.²³ In Çinici and Kızılgeçit's study, the level of predicting the results by teaching Artificial Intelligence the study data in the corona process was examined, and as a result, Artificial Intelligence presented results very close to statistical data.²⁴ The researchers investigated the application of Artificial Intelligence with data mining technique on behalf of the science of religious psychology. It was seen that Artificial Intelligence can explain the relationship and interaction of variables in clustering big data. In addition, it also provided information about the past and current values of the available data values and their possible levels in the future.²⁵ Similarly, Kızılgeçit et al. used Artificial Intelligence to predict the year 2025 according to the available study data on "Gender and Religiosity".²⁶

Religious Artificial Intelligence applications play important roles in a wide range of areas from communication to security, from preserving cultural and religious heritage to social cooperation, from statistical analysis to preaching. While Artificial Intelligence experts develop applications for religion and religious people, it is concluded that religious institutions and religious individuals will bring their religions to Artificial Intelligence applications. While religions offer the human community that can use Artificial Intelligence to Artificial Intelligence, Artificial Intelligence offers the applications it develops to religious institutions and religious individuals. In this respect, it can be said that there is a "win-win" relationship between religion and Artificial Intelligence. It is not possible to think that Artificial Intelligence is only humanity's religion. While Artificial Intelligence is still in its development phase,

²² Meryem Şahin, "Dini Bağlamda Robot Kullanımı: Budist Robot Rahip Mindar Örneği Üzerinden Tutumların Niteliksel Analizi", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 360.

²³ Randall Reed, "AI in Religion, AI for Religion, AI and Religion: Towards a Theory of Religious Studies and Artificial Intelligence", *Religions* 12/6 (2021), 396.

²⁴ Muhammed Kızılgeçit - Murat Çinici, "Koronavirüs (Covid-19) Sürecinde Yapay Sinir Ağları Yöntemiyle Bireylerin Dini Başa Çıkma Düzeylerinin Tahmini", *Journal of Theological Studies* 54 (2020), 45-65.

²⁵ Murat Çinici - Muhammed Kızılgeçit, "Yapay Zekâ ve Din Psikolojisi", *Journal of Religious Science* 59/2 (2023), 762-763.

²⁶ Muhammad Kızılgeçit etc. "Religion Prediction by Gender with Artificial Intelligence in 2020-2025 in Turkey", *Journal of Theological Studies* 56 (2021), 283-307.

predicting the possible harm that religion and religious individuals may cause will provide advantages for both disciplines.

2.2. Possible Harm of Artificial Intelligence to Religion and Religious People

Science is advancing revolutionarily, and the next step is always met with doubt.²⁷ When we look at the recent history we have witnessed; before the Internet, encyclopedias were the accepted source of accurate information in the world and took place in most people's homes. With the invention of the computer and the Internet, most people have looked suspiciously at internet information. As technological developments have been sorted out decently, Internet search engines have taken the place of encyclopedias, people have started to get information from the website without any doubt. Today, there is a period of doubt regarding the information provided by Artificial Intelligence. This doubtful stage is being overcome with academic studies. Scientific disciplines are still testing Artificial Intelligence in their fields and comparing the available information with the information provided by Artificial Intelligence.

There are threats to many religions and religious people, such as the information provided by Artificial Intelligence being biased, incorrect, incomplete, inconsistent. It can cause lies, false and incomplete information to be recorded and passed on to the next generation. This situation has critical values that can cause the destruction of the truths of religion at a rate. For this reason, studies have been conducted that test the accuracy of the information provided by Artificial Intelligence and the issue of discrimination in the field of religion. Especially considering the studies conducted in Turkey about the Islamic religion (Islamic Criminal Law, Islamic Property Law, History of Sufism, History of Hadith, Islamic sufism and The Life of the Prophet), it is very important for experts in the field to evaluate Artificial Intelligence programs. Experts have stated that while the Artificial Intelligence program Chat CPT provides academically understandable information with its instructive role, Gemini, another Artificial Intelligence program, provides popular and shallow information. By being weak in both programs in terms of mastering the language of religion, it has been found that they can provide incomplete information and, more seriously, provide information from unreliable sources.²⁸ Similar negative results were obtained in Artificial Intelligence Chat CPT and Google Bard's

²⁷ Thomas S. Kuhn, *The Structure of Scientific Revolutions*, Trans. Nilüfer Kuyas (İstanbul: Red Publications, 2006), 30-35.

²⁸ Safinur Genç - Sayyid Sancak, "Yapay Zekâ Uygulamalarının Ortaöğretim Din Kültürü ve Ahlak Bilgisi Dersinde Kullanımı 'İslam Düşüncesinde Tasavvufi Yorumlar' Ünitesi Örneği", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 118; Hüseyin Okur- Ahmet Eksi, "Yapay Zekâ (AI) Teknolojilerinin İslam Eşya Hukuku Bilgisi Üzerine Bir Değerlendirme: Chat GPT ve Google Gemini Karşılaştırması", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 30; Mehmet Ayhan- Zülal Kılıç, "Yapay Zekâ Modellerinin Hadis Tarihi Sorularına Verdiği Yanıtların Karşılaştırmalı Analizi: Chatgpt ve Gemini Örneği", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 138; Ali İhsan Kılıç, "Tasavvuf Tarihi Literatürü ve Yapay Zekâ Perspektifleri: Karşılaştırmalı Bir İnceleme", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 234; Melek Yılmaz Gömbeyaz, "Siyer Sahasında Sorulan Sorulara Yapay Zekâ Modellerinden Google Gemini Tarafından Verilen Cevaplara Dair Bir Araştırma", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 412; Abdulmuid Aykul- Mohammed Nurul Alam, "Evaluation of CHATGPT in the Field of Islamic Criminal Law", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 194.

Qur'anic exegesis study.²⁹ Gemini, Chat CPT and Microsoft Copilot programs have been examined for their ability to issue fatwas about the Islamic religion, and it has been found that they can provide erroneous, inconsistent and contradictory information.³⁰ In a qualitative research conducted with the Chat CPT Artificial Intelligence robot, the topic of faith-disbelief, natural disaster and death according to the Islamic religious principles was discussed, and it was observed that the Artificial Intelligence program usually gives correct answers from the point of view of religion and religiosity. However, the lack of references to the prophethood, the hereafter and conflicting statements about the religious principles of the holy book have made the use of Artificial Intelligence programs in religion suspicious.³¹ When the same Artificial Intelligence program was examined for the Jewish religious teachings, it was found that it gave correct answers at a high rate, but sometimes it could provide incomplete or erroneous information.³²

For all these reasons, the trust in Artificial Intelligence in religious education is also questionable. In particular, the possibility of receiving manipulative information is quite dangerous. The fact that another mechanism that can control artificial intelligence has not yet been established, and people learn their religion from an application/robot instead of a human, reduces psycho-social interaction.³³

It has enabled the application of Artificial Intelligence programs in different areas and the detection of inaccuracies. The possibility that Artificial Intelligence may exhibit a biased attitude also increases the concerns about using Artificial Intelligence in religion.³⁴ To explain deep learning with an example, it is the cognitive function of a robot that learns to pick up a pen from the ground, such as being able to figure out how to pick up a box that is on the ground, which allows it to establish a connection between questions/ problems and solutions / Deciphering ways.³⁵ This problem-solving mechanism included in devices and applications has made it logical to transfer the task to Artificial Intelligence in order to eliminate the disadvantages of people's work, such as mixing their emotions. However, here too, since the information and directives are uploaded to the Artificial Intelligence by human

²⁹ Sevim Gelgeç, "Yapay Zekâ Modellerinin Tefsir Tarihi Özelinde İncelenmesi", *Journal of Academic Research in Religious Sciences* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 494.

³⁰ Sevim Ünal, "İbadetlerle İlgili Fetvalar ve Yapay Zekâ Uygulamaları: Karşılaştırmalı Bir Analiz", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 162.

³¹ Muhammad Kızılgöç et al., "Yapay Zekâ Sohbet Robotu Chat GPT ile İnanç-İnançsızlık, Doğal Afet ve Ölüm Konuları Üzerine Nitel Bir Araştırma: Din ve Maneviyatın Psikolojik Sağlığa Etkileri", *Ağrı İbrahim Çeçen University Journal of the Institute of Social Sciences* 9/1 (2023), 137-172.

³² İsmail Taşpınar, "Yahudiliğin Yapay Zekâyâ Yaklaşımı ve Chat GPT'de Yahudilik", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 56.

³³ Hasan Özalp, "Eğitim Felsefesi Açısından Yapay Zekâ Teknolojilerine Dair Bir Okuma: Potansiyeller ve Riskler", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 1-28; Ali Gül- Mete Sipahioğlu, "Yapay Zekânın Din Eğitimindeki Rolü: Fırsatlar, Zorluklar ve Geleceğe Yönelik Çıkarımlar", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 293-323.

³⁴ Rena Schwarting - Lena Ulbricht, "Why Organization is Important in Algorithmic Discrimination", *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 74/1 (2022), 307-330; European Commission, White Paper on Artificial Intelligence- European Approach to Excellence and Trust, COM (2020) 65 Final, (Accessed December 9, 2024).

³⁵ Mustafa Ergin Şahin- Ercan Akın, "Derin Öğrenme ve Yapay Sinir Ağı Modelleri Üzerine Bir İnceleme", *EMO Scientific Journal* 14/1 (2024), 27-38.

hands, it undermines the confidence of the Artificial Intelligence to be the decision-making authority.³⁶ For example, who can ask an individual who installs directives to find members of other religions other than his own religion more guilty, erroneous, sinful and second-class people? For this reason, it is an undeniable fact that Artificial Intelligence is doubted by people in the use of their religion in learning and practice. For this reason, an Artificial Intelligence program called DALL-E that creates visuals has been studied. When the fact that the manufacturers of DALL-E, who were given verbal instructions, highlighted the elements belonging to the Christian religion, which is the religion, and depicted other beliefs less, was examined, it was found that the estimates had a share of accuracy.³⁷ The Artificial Intelligence program can lead the individuals who give it instructions to take religious facts as leading attitudes, and make other people sympathize with these religions. People use Artificial Intelligence as a tool to spread their own beliefs. This shows that Artificial Intelligence is about religion and that people should not trust AI as a religion.

Artificial Intelligence programs that take shape according to the directives can also harm religion in different ways. The inclusion of unreal identities in the cyber realm platforms used today damages both religions and the reputation of the clergy.³⁸ Especially when we look at the common topics that all people talk about, such as religion, politics, economics, health, etc. maybe so. For this reason, it stands out in the virtual world who can write, not who knows. The fact that Artificial Intelligence programs are shaped according to the person who installs the directive poses a threat to religion and clergy.

Another ethical violation is that the AI program does not provide equal religious information to both people who pay for religion and those who do not. The Chat CPT program was examined in the research. Although the bibliography has a reliability problem in both the paid and free versions, it has been found that the paid version is more descriptive and comprehensive than the free version.³⁹ In this case, it will be able to make a difference between a low-income individual who wants to learn his religion with Artificial intelligence programs and a high-income individual.

The combination of the virtual world and the real world with wearable technology accessories, the achievement of robots' Artificial Intelligence capability shows that the difference between the real world and the virtual world of humans will decelerate.⁴⁰ As a result of these developments, it is predicted that religions that can carry themselves in the digital world will continue, but resistant religions and spiritual influences will decrease. The Internet, which takes over a lot of people through computers, tablets, mobile phones, may have the power to hold all the data and direct much of humanity with the breakthrough of Artificial Intelligence.

³⁶ Schwarting - Ulbricht, "Why is Organization Important in Algorithmic Discrimination?", 307-330; European Commission. White Paper on Artificial Intelligence - European Approach to Excellence and Trust. WITH (2020), 65.

³⁷ Mark Alfano etc., "Now You See Me, Now You Don't: The Discovery of Religious Exclusion in DALL-E", *Ethics and Information Technology* 26/2 (2024), 1-13.

³⁸ Ahmet Dağ, *Dijitalleşme-Yapay Zekâ-Transhümanizm Bağlamında Din ve Dindara Dair* (Ankara: TDV Publications, 2021), 176 179.

³⁹ Ahmet Çakmak et al., "Din Eğitimi Biliminin Temel Konularında Chat GPT Yapay Zekâ Uygulama Verilerinin Güvenilirliği", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 326.

⁴⁰ Hilal Gökbayrak - Şevki Işıklı "Dijital Din Teorisi: Dijital Din Geleneksel Dine Karşı", *Yapay Zekâ, Transhümanizm ve Din*, ed. Muhammed Kızılgeçit et al. (Ankara: Directorate of Religious Affairs Publications, 2022),142.

According to futuristic claims about Artificial Intelligence, a single “Super Artificial Intelligence” that can control all Artificial Intelligences can reward or punish people by telling them right from wrong. They will also see it as possible for an Artificial Intelligence that has its own holy book and works with the power of people who believe in it to gain the title of “Digital God” even without presenting its divine claim.⁴¹

2.3. Recommendations Given as a Result of Artificial Intelligence and Religion Research

After Artificial Intelligence technology is integrated into everyday life, it may sometimes be possible and sometimes impossible to repair the damage it will cause to people. For this reason, action should be taken in order to increase the benefits of Artificial Intelligence technology, especially in the field of religion and spirituality, and to reduce or where possible, eliminate its harms.⁴²

When it comes to the use of Artificial Intelligence in religion, the first thing that comes to mind is whether it is ethical. Under the main heading of Ethics, there are many sensitive sub-headings such as the possible theoretical damage of Artificial Intelligence to religions and religious individuals, the possibility of interfering with an individual's private life, and the protection of personal data. As a result of many studies conducted in the literature about the ethics of Artificial Intelligence, common ideas stand out. From a person's right to life to equal opportunities in education, the state, which is the decision-making authority in ethical situations, is also expected to take steps on Artificial Intelligence and religion. It is necessary to determine national and international laws for the protection of religious values and their legal binding.⁴³ When the subject of Artificial Intelligence and religion is examined in terms of Islamic Law, there are many benefits that Artificial Intelligence can provide in terms of religion. However, it has been concluded that even the simplest applications that are likely to harm Muslims and all people should be prohibited or restricted. For example, according to Islamic law, Artificial Intelligence technologies should not harm people, animals or the environment according to their own algorithms. It is expected not to disrupt social order and not to establish justice according to itself. According to this Law, this situation can only be used by developing another mechanism that controls robots/applications that can act independently of morality, values and law.⁴⁴

Studies conducted in the field of religious sciences show that religions have a function that keeps people together sociologically, provides psychological support in the struggle for life of an individual by deciphering birth, death, life in human life, has a preventive medicine aspect,

⁴¹ Peter Grad, “AI Jesus Writes Bible-Inspired Verse, TechXplore” (Accessed December 9, 2024) Act. Ahmet Efe, “Ethical Evaluation of Artificial Intelligence Risks”, *Journal of Information and Communication Technologies* 3/1 (2021), 11.

Nancy K. Lankton et al., “Technology, Humanity and Trust: Rethinking Trust in Technology”, *Journal of the Association for Information Systems* 16/10 (2015), 880-890; Hasan Kafalı, “Toplum ve Din Bağlamında Yapay Zekâ”, *Yapay Zekâ Transhümanizm ve Din*, Ed. Muhammad Kızılgeçit et al. (Ankara: Presidency of Religious Affairs Publications, 2021), 101.

⁴³ Özalp, “Eğitim Felsefesi Açısından Yapay Zekâ Teknolojilerine Dair Bir Okuma: Potansiyeller ve Riskler”, 1-28; Gül-Sipahioğlu, “Yapay Zekânın Din Eğitimindeki Rolü: Fırsatlar, Zorluklar ve Geleceğe Yönelik Çıkarımlar”, 293-323; Necmi Karşlı, *Yapay Zekâ ve Din* (Ankara: Theological Publications, 2024), 13.

⁴⁴ Ülfet Görgül - Sena Ayık, “Yapay Zekâ Robotlara Ahlâki ve Hukuki Statü Tanınması Problematikliği-İslam Ahlâki ve Hukuku Açısından Bir Değerlendirme”. *Recep Tayyip Erdoğan University Journal of Faculty of Theology* 20 (2021), 37-65.

and provides psychological support in the struggle for life.⁴⁵ The benefits and harms of this can be discussed. In addition to the religious benefits of artificial intelligence, the potential harms can be reduced with some plans. If Artificial Intelligence technology is used in the field of religion, there is a danger that all these benefits of religions will remain in the background.⁴⁶ For example, while people's praying allows them to connect with God psychologically, praying as directed by an Artificial Intelligence application can eliminate the feeling of connecting with God. Or it may be pedagogically harmful for a young person who has just entered adolescence and wants to learn his religion and an adult to respond to a religion-related question in the same way as Artificial Intelligence. Therefore, before starting the use of Artificial Intelligence in religion, it is necessary to plan and program interdisciplinary studies in the fields of Engineering and Religious Sciences by examining the questions of "what, why, where, when, how and who".⁴⁷

The damage that Artificial Intelligence will cause to any religion will also cause damage to the economy, politics, education, health, justice, daily life and human relations of the individual and society who believes in that religion. Therefore, it is necessary to complete the changes and transformations of religions according to the stretching share in the age of Artificial Intelligence technology without changing the constants of religions.⁴⁸ Considering all these reasons, according to the paradox of dataism and religious values, it is seen that in order for religious individuals to survive cultural integration Decently, there is a need for studies between the advisory boards of institutional religions and Religious Sciences disciplines, where religious values and beliefs are examined for change and transformation.⁴⁹

The last step may be aimed at eliminating negative attitudes towards Artificial Intelligence, especially of religious individuals. When the religiosity rate increases, the Artificial Intelligence anxiety rate increases and the attitude towards Artificial Intelligence becomes negative, causing religious individuals to worry and anger is an important data for Artificial Intelligence and religion research.⁵⁰ This negative attitude towards Artificial Intelligence can sometimes be caused by suspicion of Artificial Intelligence programs, as well as sometimes by an individual's religious belief. For example, the belief of the "Antichrist" contained in the holy books and

⁴⁵ Hayati Hökelekli, *Din Psikolojisi* (Ankara: TDV Publications, 2017), 63-73; Viktor E. Frankl, *Man's Search for Meaning*, Trans. Selçuk Budak (İstanbul: Okuyan Publications, 2018), 111-115.

⁴⁶ Hasan Kafalı, "Yapay Zekâ, Toplum ve Dinin Geleceği", *Journal of the Faculty of Theology of Ondokuz Mayıs University* 46 (2019), 145-148; Mehmet Ödemiş, "Yapay Zekâda Ruh/Bilinç ve Menşei Problemi", *Yapay Zekâ, Transhümanizm ve Din*, Ed. Muhammed Kızılgeçit et al. (Ankara: Presidency of Religious Affairs, 2022), 80; Ercan Öztemel, "Yapay Zekâ ve Din", *Yapay Zekâ, Transhümanizm ve Din*, Ed. Muhammad Kızılgeçit al. (Ankara: Presidency of Religious Affairs, 2022), 29; Aura Elen Schussler, "Transhumanism as a New Techno-Religion and Personal Development: Within the Framework of a Future Technological Spirituality", *Journal of Research on Religions and Ideologies* 18/53 (2019), 92-94.

⁴⁷ Birol Akgül-İlhan Ören, "Yapay Zekâ Temelinde İnsan: Dataizm ve Dini Değer Paradoksu", *Journal of Media and Religious Studies* 4/1 (2021), 74; Kafalı, "Toplum ve Din Bağlamında Yapay Zekâ", 87- 102.

⁴⁸ Dağ, Dijitalleşme-Yapay Zekâ-Transhümanizm Bağlamında Din ve Dindara Dair, 176-179; Öztemel, "Yapay Zekâ ve Din", 29.

⁴⁹ Akgül - Ören, "Yapay Zekâ Temelinde İnsan: Dataizm ve Dini Değer Paradoksu", 87- 102.

⁵⁰ Idris Yakut, "Yapay Zekâyâ Yönelik Tutum ve Dindarlık İlişkisi", *Kocatepe Journal of Islamic Sciences* 7 /1, (2024), 56-57; Jaroslaw Kozak - Stanislaw Fel, "The Relationship between Religion Level and Emotional Responses to Artificial Intelligence in University Students", *Religions* 15/3 (2024), 331; Malgorzata Gruchola etc., "Artificial Intelligence as a Tool Supporting Prayer Practices", *Religions* 15/3 (2024), 271; Mehmet Kazak, *Yapay Zekâ Kaygısı, Yabancılaşma ve Dindarlık İlişkisi* (Denizli: Pamukkale University, Institute of Islamic Sciences, Master's Thesis, 2023), 60-74.

ancient teachings, which marks the end of the world and tries to remove all humanity from religion, can be paired with Artificial Intelligence.⁵¹ As a result of many studies, it has been found that training should be provided for people to recognize and use Artificial intelligence programs in order to reduce concerns about Artificial Intelligence.⁵² In a study conducted on students of the Faculty of Theology, it was found that positive attitudes towards Artificial Intelligence increased when Artificial Intelligence literacy increased.⁵³ Another study conducted on Muslims found that the use of Artificial Intelligence in religious tourism provides a positive attitude towards Artificial Intelligence.⁵⁴ It has also been found that the increasing use of Artificial Intelligence in the field of religion and spirituality and the proliferation of human knowledge about Artificial Intelligence break the prejudice towards Artificial Intelligence. Therefore, it is estimated that the proliferation of Artificial Intelligence programs that can be used in the field of religion and spirituality, the beginning of their implementation in religious institutions, as well as the provision of training on how to use these programs will turn the negative attitude towards Artificial Intelligence in religion into a positive one.

Conclusion

This study, which was conducted using a literature review, provides critical information for the fields of Religious Sciences and Artificial Intelligence Engineering. In the field of Psychology of Religion, October and November 2025, Artificial Intelligence and Religion data Google Scholar and ResearchGate As a result of the search made from search engines, 43 articles, 7 international conferences, 3 theses, 3 web pages and 8 book information were compiled, a total of 72 source solutions. The study tries to remove the obstacle between individuals with high religious attitudes not to be left behind in the age of Artificial Intelligence and artificial Intelligence applications reaching individuals with high religious attitudes.

As a result of the analysis and synthesis of national and international studies conducted on Artificial Intelligence and Religion, it has been found that there is a strong two-way relationship between Religion and Artificial Intelligence. Religious and religious individuals can use Artificial Intelligence technology in conversations with members of other religions, religious education, language translations of religious texts, halal food, religious donations, religious audio and visual works of art, even as a personal religious assistant, while doing this, it is envisaged that they will carry their religion to Artificial Intelligence applications. Thus, it has been seen that when Artificial Intelligence companies design products that will facilitate their religious life suitable for religious individuals, the customer base is ready. As it is now, it has been concluded that Artificial Intelligence Programs have been left in the classroom because they provide incomplete, shallow, inaccurate and unreliable information, and that they should be improved

⁵¹ Kazak, *Yapay Zekâ Kaygısı, Yabancılaşma ve Dindarlık İlişkisi*, 60-74; La Cruz-Mora, "Researching Artificial Intelligence Applications in Evangelical and Pentecostal/Charismatic Churches: Purity, Bible, and Mission as Driving Forces", 234.

⁵² Nazife Takıl, vd., "Farklı Meslek Grubu Adaylarının Yapay Zekâ Teknolojisine Yönelik Kaygı Seviyesinin İncelenmesi", *Journal of Balıkesir University Social Sciences Institute* 25/48 (2022), 351-352.

⁵³ Sümeyra Karacan Bilecik-Şeyma Çiçek, "İlahiyat Fakültesi Öğrencilerinin Yapay Zekâ Okuryazarlık Düzeyleri ile Yapay Zekâya Yönelik Tutumları", *Journal of Religious Studies Academic Research* 24/3 (Special Issue: Artificial Intelligence and Theology: New Paradigms December 2024), 260.

⁵⁴ Naseer Abbas Khan, "Artificial Intelligence, Self-Efficacy and Engagement in Religious Tourism: Evidence from Arbaeen Pilgrimage", *Journal of Hospitality and Tourism Insights* 7/3 (2024), 1660-1661.

in terms of mastering the language of religion. In addition, the fact that the paid and free versions offer non-equivalent information, provide biased information according to the opinion of the individual from whom he receives directives, shows that it is manipulative. The recommendations issued as a result of the research are listed below:

1. In order for the use of Artificial Intelligence in religion to become safe, there is a need to regulate national and international legal legislation.
2. Artificial Intelligence Engineers and Religious Science specialists are required to plan and program for the development of Artificial Intelligence applications by conducting interdisciplinary research.
3. It should not be ignored that the attitudes of the Decadent teachings and religious teachings towards Artificial Intelligence will affect the attitudes of the members of the religion. For this reason, members of religion need interdisciplinary studies of advisory boards and Religious Science experts in order for existing institutional religions to realize healthy religious conversions while stepping into the age of Artificial Intelligence.
4. As the acquisition of knowledge about Artificial Intelligence increases and the use of Artificial Intelligence applications increases, it has been concluded that after shortcomings that have been counted have been eliminated, the proliferation of trainings providing information about Artificial Intelligence and the start of Artificial Intelligence applications in religion, especially under the leadership of religious institutions, will be beneficial.

Identity, photos, videos, education, health, bank, family and all private information are submitted to Artificial Intelligence Programs without hesitation, eliminating shortcomings and mistakes before handing over humanity's religions, eliminating doubts will shape the life of religious and religious individuals in the coming years.

Thus, individuals with high religiousness and sensitivity to religious issues will be able to use Artificial Intelligence technologies easily. This situation will increase the number of customers of Artificial Intelligence companies and will be able to reach large masses with a social transformation.

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The Possibility of Producing Reliable Religious/Islamic Knowledge Through AI Developed Under the Influence of Positivist and Secular Thought*

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Abstract

This study critically analyzes the structure of artificial intelligence (AI), shaped within the framework of the secular-materialist paradigm and transhumanist perspectives. It questions the instrumentalization of human beings and all human-related aspects by reducing them to data under the hegemony of secular positivism, sidelining moral and spiritual values, and neglecting the transcendental (metaphysical) dimension in the processes of producing religious knowledge. The study explores how AI can be reinterpreted in line with Islam's ontological, moral, and human-centered values and discusses how unique models can be developed accordingly. The research examines the effects of AI on the production of religious knowledge by considering its background operating with secular positivist and transhumanist perspectives and it addresses the opportunities/challenges related to this with new perspectives and suggestions. In this context, the neglect of the metaphysical dimension by AI in producing religious knowledge, its construction upon a secular perspective, and its shortcomings in contextual analyses are discussed. Furthermore, the cultural hegemony reflected in the use of AI as a tool within the colonial power matrix is critically evaluated through the lens of the literature, addressing the possibility of producing religious knowledge from multiple dimensions. The study emphasizes the necessity for Muslim societies to develop indigenous knowledge systems harmonized with their unique cultural frameworks and provides recommendations on the foundational elements for such an endeavor. This analysis aims to explore ways AI can contribute to the prosperity of humanity and the establishment of justice. Methodologically, the study adopts qualitative research techniques, analyzing the epistemological and ontological foundations of AI within the secular positivist paradigm through a literature review. The potential of AI in producing religious knowledge is examined comparatively, considering traditional reasoning methods in Islamic thought, such as *qiyās*, *istihsān*, and *istiqrāʾ*, alongside modern algorithmic approaches. Additionally, the potential opportunities AI may offer and the risks it may pose in the production of religious knowledge are evaluated based on evidence from the literature. The findings indicate that AI is historically and philosophically rooted in secular paradigms and is designed, within transhumanist approaches, as a technology that compels humanity to transcend biological and cognitive limitations. It is utilized as a tool of cultural hegemony and operates under these motivations in the processes of producing religious knowledge. The hegemonic impacts of AI in knowledge production are discussed within the context of Anibal Quijano and Walter Dignolo's "colonial power matrix" framework, analyzing its role as an instrument of colonial spatiality. Furthermore, modern technologies are evaluated through examples in the literature as factors that can lead to the decentralization, decontextualization, and loss of the authentic character of religious knowledge. Other findings reveal that AI has inherent limitations in the production of religious knowledge, as it tends to prioritize secular and materialist perspectives despite the presence of metaphysical principles in scientific knowledge. In contrast, integrating classical methods with modern technology -through the synthesis of traditional Islamic knowledge production methodologies and AI reasoning techniques- offers a new perspective for producing religious knowledge. Additionally, the necessity to redesign AI in accordance with Islam's moral and human-centered values is emphasized to preserve and transmit the unique character

of religious knowledge. The study concludes that Muslim societies must establish indigenous technological infrastructures to structure AI on the principles of accessibility, justice, and inclusivity.

Keywords

Islamic Law, Artificial Intelligence, Religious Knowledge, Epistemology, Islamic Thought

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Pozitivist ve Seküler Düşüncenin Etkisinde Geliştirilen Yapay Zeka Aracılığıyla Güvenilir Dini/İslami Bilgi Üretiminin İmkânı*

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Öz

Bu çalışma, yapay zekanın seküler materyalist paradigma ve transhümanist perspektif çerçevesinde şekillenmiş yapısını, eleştirel bir bakış açısıyla analiz etmektedir. Yapay zekanın seküler pozitivist hegemonyanın bir aracı olarak insanı ve insana dair her şeyi veri (data) haline getirip araçsallaştırması, ahlaki ve manevi değerleri arka plana itmesi ve dini bilginin üretim süreçlerinde bilginin aşkın (metafizik) boyutunu ihmal etmesi sorgulanmaktadır. Çalışma, yapay zekanın İslam'ın ontolojik, ahlaki ve insani değerleri doğrultusunda nasıl yeniden anlamlandırılabilirliğini ve bu doğrultuda özgün modellerin nasıl geliştirilebileceğini ele almaktadır. Araştırma kapsam olarak, yapay zekanın seküler pozitivist ve transhümanist bakış açılarıyla işleyen arka planını ele alarak dini bilginin üretimine etkilerini incelemekte, buna dair fırsatları/zorlukları yeni bakış açıları ve önerilerle ele almaktadır. Bu bağlamda yapay zekanın, dini bilginin üretilmesinde metafizik boyutu ihmal etmesi, seküler bir perspektif üzerine inşa edilmiş olması ve bilginin bağlamsal analizlerdeki ihmalleri tartışılmıştır. Özellikle kolonyal güç matrisi çerçevesinde yapay zekanın bir araç olarak kullanıldığına dair kültürel hegemonyanın iz düşümleri literatür çerçevesinde incelenmiş ve dini bilginin üretilme imkanı birçok boyutuyla ele alınmıştır. Buradan hareketle Müslüman toplumların kendilerine özgü kültürel bağlarla harmanlanmış yerli ve milli bilgi sistemlerinin geliştirilmesi gerekliliğine vurgu yapılmış ve bu sürecin hangi unsurlara dayalı olarak ele alınacağına dair öneriler sunulmuştur. Böylece, yapay zekanın insanlığın felahına ve adaletin tesisine katkıda bulunacak şekilde sevk edilmesine dair arayışlar irdelenmiştir. Yöntem olarak çalışmada nitel araştırma teknikleri benimsenmiş, literatür taraması yoluyla yapay zekanın seküler pozitivist paradigmadaki epistemolojik ve ontolojik temellere dair bulguları analiz edilmiştir. Yapay zekanın dini bilgiyi üretme potansiyeli İslam düşüncesindeki kıyas, istihsân ve istikrâ gibi geleneksel akıl yürütme yöntemleri ile modern algoritmik yaklaşımlar çerçevesinde karşılaştırmalı olarak incelenmiştir. Ayrıca, yapay zekanın dini bilginin üretiminde sunabileceği potansiyel fırsatlar ve karşılaşılabilecek riskler literatürden kanıtlarla ele alınmıştır. Çalışmanın bulguları arasında yapay zekanın seküler paradigmalara ilişkilendirilen tarihsel ve felsefi temellere sahip olduğu, transhümanist yaklaşımlar çerçevesinde insanı biyolojik ve bilişsel sınırlarını aşmaya zorlayan bir teknoloji olarak tasarlandığı, kültürel hegemonyanın bir aracı olarak kullanıldığı ve dini bilgi üretim süreçlerinde de bu saiklerle hareket ettiği görülmüştür. Özellikle Anibal Quijano ve Walter Dignolo'nun "sömürgeci/kolonyal güç matrisi" teorileri bağlamında yapay zekanın bilgi üretimindeki hegemonik etkileri tartışılmış ve sömürgeciliğin uzamsal bir aracı olduğuna dair tespitler incelenmiştir. Ayrıca, modern teknolojilerin dini bilginin merkezileşmesine, bağlamsızlaşmasına ve otantik karakterini kaybetmesine yol açabileceği literatürdeki örneklerle değerlendirilmiştir. Araştırmanın diğer bulguları, yapay zekanın dini bilgi üretimindeki sınırlılıklarının olduğu, bilimsel bilgi içerisinde metafizik ilkelerin olmasına rağmen dini bilginin metafizik boyutlarını ihmal ettiği, seküler ve materyalist bir bakış açısıyla bilgi üretme eğiliminde olduğunu da ortaya koymaktadır. Buna karşın klasik yöntemlerin modern teknolojiye entegrasyonu sayesinde -geleneksel İslami bilgi üretim metodolojileri ile yapay zekanın akıl yürütme yöntemlerinin- meczedilmesi dini bilgi üretiminde yeni bir bakış açısı sunabileceğine dair öneriler ele alınmıştır. Ayrıca yapay zekanın İslam'ın ahlaki ve insani değerleri doğrultusunda yeniden tasarlanma gereksinimi dini bilginin özgün karakterinin korunarak üretilmesine ve aktarılmasına imkan tanıyabilmesi,

Müslüman toplumların bu alanda yerli ve milli teknoloji altyapıları oluşturarak; erişebilirlik, adalet ve kapsayıcılık temelinde yapay zekayı yapılandırmalarının zorunluluğu ortaya konmuştur.

Anahtar Kelimeler

İslam Hukuku, Yapay Zeka, Dini Bilgi, Epistemoloji, İslam Düşüncesi

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Etik Beyan	*Bu makale, İsrail'in Gazze'deki üniversitelere, okullara, hastanelere, mülteci kamplarına, evlere, camilere ve kiliselere yönelik vahşi, barbar, insanlık dışı ve yasa dışı saldırıları sonucunda hayatını kaybeden bilim insanlarına, öğrencilere, sağlık çalışanlarına, din görevlilerine, gazetecilere, bebeklere, çocuklara ve masum sivillere ithaf edilmiştir. İsrail'in iki milyondan fazla Gazzeliyi evlerinden ve topraklarından zorla yerinden etmesi insanlık dışı ve hukuka aykırıdır. Uluslararası hukuku, insan haklarını ve özgürlüklerini ihlal eden tüm İsrail işgalleri ve saldırıları birer suçtur. Bu nedenle İsrail, savaş ve soykırım suçlarından yargılanmalıdır.
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Introduction

Artificial Intelligence (AI) has emerged as a prominent technological tool shaped by the secular-materialist paradigm¹ and exerting significant influence on the global system.² While this paradigm determines the dimensions of social, economic, and technological transformations in human history, it also paves the way for moral and existential crises.³ AI, with its potential benefits and associated risks, has become a topic of critical discussion for both individuals and societies.⁴

AI systems, built upon secular-materialist values and underpinned by an ideological positivist mindset, reduce humanity to a mere source of data and exhibit tendencies to establish economic, political, and technological hegemony through the exploitation of this data.⁵ However, transforming AI into a tool that enhances human well-being and contributes to the establishment of justice requires reevaluating this technology based on moral and human values.⁶ It is imperative to consider that artificial intelligence brings forth numerous challenges, including bias, discrimination,⁷ monopolization, surveillance and privacy violations, environmental concerns, and particularly the deprivation of capacity utilization.⁸ These issues

¹ The secular positivist/materialist paradigm is addressed as a mode of thinking that systematically excludes religion, faith, and values, attempting to interpret human life solely through material realities and Western-centric scientific truths. This paradigm adopts an approach that disregards the spiritual and moral dimensions of human existence, reducing all aspects of life to measurable, objective, and material criteria. For further details on this concept, frequently used to explain the philosophical background of artificial intelligence, see: Syed Muhammad Naquib Al-Attas, *Islam and Secularism* (Kuala Lumpur: ISTAC, 1993), 1-15.

² King-Ho Leung, "The Picture of Artificial Intelligence and the Secularization of Thought", *Political Theology* 20/6 (2019), 457-471.

³ Yaqub Chaudhary, "Islam and Artificial Intelligence", *The Cambridge Companion to Religion and Artificial Intelligence*, ed. Beth Singler- Fraser N. Watts, (Cambridge: Cambridge University Press, 2024), 109-129.

⁴ Utku Köse, "Are We Safe Enough in the Future of Artificial Intelligence? A Discussion on Machine Ethics and Artificial Intelligence Safety", *Brain-Broad Research in Artificial Intelligence and Neuroscience* 9/2 (2018), 184-197.

⁵ Cihannüma, *Yapay Zekâ ve İnsanlığın Geleceği: Fırsatlar ve Tehditler*, Final Report (Ankara: Cihannüma Yayınları, 2024), 28-29.

⁶ AI operates with big data and is developed by requiring even more data. Big data enables technology to increase its capacity for generating, collecting, storing, and processing data, while the demand for data transforms every aspect of life, including humanity itself, into a structure oriented toward data production. This situation raises the risk of reducing everything to a data format, thereby turning human beings into mere tools. For detailed information, see: Osman Sahin - İhsan Çapcıoğlu, "Toplumsal Gerçekliğin İnşasından 'Büyük Veri'ye Bilginin Dönüştürücü Etkisi", *İslami Araştırmalar Dergisi* 32/3 (2021), 684-696.

⁷ To explore studies examining the discriminatory nature of AI and the areas in which it demonstrates bias, see: Cathy O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (New York: Crown, 2016); Yonatan Zunger, "Machine Learning and the Problem of Bias", 2017; Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: NYU Press, 2018); Joy Buolamwini - Timnit Gebru, "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification", *Proceedings of Machine Learning Research* (1st Conference on Fairness, Accountability and Transparency, New York: PMLR, 2018), 77-91; Nicholas Thompson, "What is AI Bias? And How Can We Fix It?", *Wired* (blog) (Access 12.01.2025).

⁸ In contemporary global society, disparity in technological access manifests as a novel form of power imbalance. A salient example of this phenomenon is the inequality in access to artificial intelligence technologies on a global scale. Economic constraints (high costs of advanced hardware and software solutions), geographical and geopolitical barriers, systematic disparities in technical education opportunities, and linguistic-cultural impediments are hindering the equitable utilization of these technologies at a universal level, thereby generating the phenomenon of capacity access deprivation. See: Ahmet Dağ, *Transhümanizm: İnsan ve Dünyanın Dönüşümü* (Ankara: Elis Yayınları, 2020), 220-228.

warrant careful consideration in the development and implementation of AI systems. Otherwise, AI risks becoming a mechanism that drives humanity toward moral degradation and spiritual erosion.

In this context, a crucial question for the Islamic world is whether AI technology can be addressed within the framework of Islam's ontological, moral, and human-centered values. It is essential for Muslims to design AI technologies in a "human-centric" manner that aligns with Islam's truth- and justice-based worldview to minimize the harmful effects of this technology. Furthermore, developing indigenous and localized AI infrastructures is of paramount importance to transform the capacity of this technology into a perspective that is fair, transparent, and oriented toward serving humanity.⁹

The application of AI technologies in religious research has been increasingly addressed in the literature.¹⁰ However, it must also be acknowledged that these technologies often neglect the spiritual dimension of religious knowledge¹¹ and objectify it by reducing it to mere data. By redefining traditional concepts of thought and intelligence, AI posits the possibility of "thinking without humans," thereby weakening the connection between thought and the spiritual dimension.¹²

The aim of this study is to highlight the necessity for Muslims to interpret, instrumentalize, and develop unique models of AI technology in accordance with their own value systems, as a response to the impositions of the secular-materialist mindset. Additionally, the study provides a critical analysis of existing AI technologies and explores how they can be more effectively utilized based on religious knowledge and social justice. Through data obtained from the literature this study aims to demonstrate how artificial intelligence can be reimagined and repurposed to align with the ontological, moral, and human-centered principles of Islam.

This analysis underscores the urgency of reevaluating AI technologies to ensure their alignment with ethical and spiritual values, emphasizing the importance of developing indigenous frameworks that reflect Islamic principles. Such an approach is vital not only for

⁹ Cihannüma, *Yapay Zekâ ve İnsanlığın Geleceği: Fırsatlar ve Tehditler*, 29-30.

¹⁰ The production of religious knowledge through AI-based applications has been addressed by various disciplines. For some of these studies, see. Ali Polat vd., "An Inquiry into the Application of Artificial Intelligence on Fatwa", *Digital Transformation in Islamic Finance: A Critical and Analytical View*, ed. Yasushi Suzuki - Mohammad Dulal Miah (London: Routledge, 2022), 274-285; Furkan Çakır, "Yapay Zekâ ve Hadis", *Şırnak Üniversitesi İlahiyat Fakültesi Dergisi* 32 (2023), 109-131; Muhammet Yurtseven, "İslami Finans Alanında Yapay Zeka İle Tasarlanmış Fetva Uygulamaları: Robo Shariah ve Smart Müfti Örneği" (İslam Hukuku Araştırmalarına Zemin Oluşturması Açısından "Yapay Zeka") Burdur: Burdur M. Akif Ersoy Üniversitesi, 2022), 81; Siti Rohaya Mat Rahim vd., "Artificial Intelligence, Smart Contract and Islamic Finance", *Asian Social Science* 14/2 (2018), p145; Fatma Ekinci, "Sanallaştırılma Sürecinde Dini Bilginin Hakikat Problemi", *Medya ve Din Tartışmaları Sempozyum Bildirileri*, ed. Mete Çamdereli vd. (İstanbul: İstanbul Ticaret Üniversitesi, 2016); Sevim Ünal, "İbadetlerle İlgili Fetvalar ve Yapay Zekâ Uygulamaları: Karşılaştırmalı Bir Analiz", *Dinbilimleri Akademik Araştırma Dergisi* 24/3 (2024), 161-192.

¹¹ In this study, the concept of "religious knowledge" is specifically used within the context of Islamic epistemology and is treated as synonymous with "Islamic knowledge." Therefore, the expression "religious knowledge" throughout the article refers exclusively to the type of knowledge produced, transmitted, and interpreted within the framework of Islam. Knowledge systems in other religious traditions are beyond the scope of this study.

¹² Leung, "The Picture of Artificial Intelligence and the Secularization of Thought", 457-458.

mitigating the risks associated with AI but also for positioning it as a tool that contributes to human flourishing and the realization of justice.¹³

1. The Nature of AI Within the Framework of Secular Positivism and Transhumanism

One of the most striking areas of discussion in the modern era is the epistemological and ontological inquiries that have emerged alongside the development of AI technologies. While debates on AI continue within the frameworks of secular positivism and transhumanism, the impact of these technological advancements on the production of religious knowledge has become a significant topic in the literature.¹⁴ Although technological advancements provide new opportunities in the processes of producing and transmitting religious knowledge, they also bring about certain limitations.¹⁵

Particularly, debates surrounding objectivity, freedoms, and access capacity directly influence the production processes of religious knowledge in the modern era. A critical question arises: What are the boundaries of the opportunities provided by technology, and what role do these boundaries play in the production of religious knowledge?

The relationship between secular positivist approaches and religious knowledge has taken on a new dimension with the development of AI technologies. While recognizing the distinct values and methodologies of both types of knowledge on a theoretical level may seem like a potential solution, in practice, this reconciliation is largely absent. While proponents from the religious perspective acknowledge that the critical perspective offered by secular positivism could contribute to the production of religious knowledge, the disregard for preserving the unique character of religious knowledge by the other side often shifts the discussion to an ideological ground.¹⁶ In this context, the role of AI technologies in the production of religious knowledge is an issue that must be addressed in both technical and religious-moral dimensions.

One of the most pressing questions of the modern era is how the opportunities offered by technology can be utilized while preserving the unique character of religious knowledge, the quality of such knowledge to be produced, and humanity's position in this scenario. To move beyond ideological approaches, it is essential to evaluate objectively both the opportunities provided by technological advancements and the inherent values of religious knowledge. The following sections explore in detail whether technological advancements grounded in a secular

¹³ Religious and philosophical debates on AI open a space where technology redefines the roles of creator and creation and impacts belief systems. For related discussions, see. Heidi A Campbell, "Framing the Human-Technology Relationship: How Religious Digital Creatives Engage Posthuman Narratives", *Social Compass* 63/3 (2016), 303.

¹⁴ Beth Singler, "An Introduction to Artificial Intelligence and Religion For the Religious Studies Scholar", *Implicit Religion* 20/3 (2017), 215-231; Beth Singler - Fraser N. Watts (ed.), *The Cambridge companion to religion and artificial intelligence* (Cambridge, United Kingdom: Cambridge University Press, 2024); F. Leron Shults - Wesley J. Wildman, "Simulating Religion", *The Cambridge companion to religion and artificial intelligence*, ed. Beth Singler - Fraser N. Watts, Cambridge companions to religion (Cambridge, United Kingdom: Cambridge University Press, 2024), 241-273.

¹⁵ To explore discussions on how religious knowledge in the modern era differs in its purposes and methods from traditional approaches and the tendencies through which it is addressed today, see. Tahsin Görgün vd. (ed.) at all, *Modern Dönemde Dini İlimlerin Temel Meseleleri* (İstanbul: İsam / İslam Araştırmaları Merkezi, 2007), 17-238.

¹⁶ Willem B. Drees, "Religion in an Age of Technology", *Zygon* 37/3 (2002), 597-604.

positivist background permit such evaluations and the fundamental motivations behind this dynamic.

1.1. The Potential of Secular Positivist-Based AI to Produce Religious Knowledge

The secular positivist approach emerges as a significant paradigm in modern intellectual history, questioning the epistemological position of religious knowledge. This approach asserts that knowledge can only be acquired through empirical and measurable data, excluding the metaphysical and spiritual dimensions of religious knowledge from the category of scientific knowledge. Consequently, the nature of religious knowledge and its processes of acquisition are rendered a contentious and often neglected area within this framework.¹⁷

By its very nature, religious knowledge is grounded in divine sources and interprets human existence within a transcendent framework.¹⁸ This inherently leads to theoretical conflicts and practical divergences with the prevailing secular paradigm.¹⁹ Moreover, the positivist approach, despite the distinct nature of religious knowledge, evaluates it through an ideological lens and attempts to impose the foundational criteria of scientific methodology -testability, repeatability, and measurability- on religious knowledge.²⁰ However, the essence of religious knowledge transcends these criteria, encompassing the spiritual and metaphysical dimensions of human experience with events and phenomena. Consequently, the methods of positivist scientific knowledge are fundamentally incompatible with the nature of religious knowledge.²¹

At this juncture, artificial intelligence, constructed within a secular positivist framework, must also be critically assessed regarding its approach to evaluating religious knowledge from both ontological and epistemological perspectives.²² To address the question, “Is positivist modern knowledge independent of metaphysical principles?” the following answers can be provided within the framework of the metaphysical foundations of scientific paradigms:

The assumption that modern scientific paradigms rely solely on empirical observation and experimentation often leads to an oversight of the metaphysical principles inherent in science itself.²³ In fact, the production of scientific knowledge depends on foundational metaphysical assumptions that shape the nature and boundaries of science.²⁴ One of the most fundamental metaphysical principles underpinning scientific thought is realism. This perspective asserts that

¹⁷ Tahsin Görgün, “Batı Medeniyeti İçerisinde İslâmî İlimler Mümkün müdür? Modern Dönemde Dinî İlimlerin Temel Meselelerine Temelli Bir Bakış”, *Modern Dönemde Dinî İlimlerin Temel Meseleleri (İlmî Toplantı)*, ed. Tahsin Görgün vd. (İstanbul: İSAM / İslam Araştırmaları Merkezi, 2007), 11-30.

¹⁸ Ahmet Cevizci, *Büyük Felsefe Sözlüğü* (İstanbul: Say Yayınları, 2017), “Bilgi”.

¹⁹ Colin A. Russell, “The Conflict of Science and Religion”, *The History of Science and Religion in the Western Tradition*, ed. Gary B. Ferngren (London: Routledge, 2000), 11-17.

²⁰ Thomas McPherson, “Positivism and Religion”, *Philosophy and Phenomenological Research* 14/3 (1954), 319-331.

²¹ Adnan Aslan, “Geleneksel Ekolün Modernizm Eleştirisi ve İslâm Düşüncesindeki Yansımaları”, *İslâm ve Modernleşme* (Kutlu Doğum İlmî Toplantısı, İstanbul: İSAM / İslam Araştırmaları Merkezi, 1997), 25-40.

²² To explore debates surrounding the testability of knowledge through scientific methods, see. Muhammet Yurtseven, “Şer’i Bilginin Epistemik Değeri Açısından Din ve İktisat İlişkisi”, *Tevilat* 4/1 (2023), 220-221.

²³ To explore the dilemmas of scientific knowledge and the critiques related to them, see. Erhard Oeser, “Bilimsel Evrenselcilik”, çev. Nejat Bozkurt, *Felsefe Arkivi* 25 (2013), 64-65.

²⁴ Ian G. Barbour, *Bilim ve Din: Çatışma-Ayrışma-Uzlaşma*, çev. Nebi Mehdi - Mübariz Camal (İstanbul: İnsan Yayınları, 2004), 158-162.

the universe exists independently of the human mind and that there is an objective reality to be discovered. Scientific realism also accepts the existence of unobservable theoretical entities. For instance, while subatomic particles cannot be directly observed, their existence is acknowledged within the framework of scientific realism.

A second significant metaphysical principle is the assumption of regularity and causality in the universe. Science presupposes that the laws of nature are universal and unchanging. This principle of determinism is notably evident in Einstein's objections to quantum mechanics. His famous statement, "God does not play dice," underscores his belief that the universe operates according to defined laws rather than randomness, calling attention to the necessity of embracing metaphysical principles.²⁵

The third metaphysical principle is the assumption that the universe is comprehensible, and that human intellect can achieve this understanding. This belief underpins the pursuit of scientific inquiry and the expectation that nature can be decoded by rational thought.²⁶ Additionally, naturalistic approaches serve as a fundamental presupposition in the production of scientific knowledge, providing a framework for interpreting empirical findings within the bounds of natural phenomena.²⁷ These metaphysical principles, including realism, causality, and comprehensibility, are not merely philosophical but are intrinsic to the functioning of science itself, shaping its methodologies, objectives, and limitations.

Neglecting the metaphysical foundations upon which modern science is built leads to an incomplete understanding of the structure of scientific knowledge. For instance, subjects such as the origin of the universe in cosmology or the mind-body relationship in studies of consciousness are significant due to their metaphysical dimensions, which cannot be fully explained through purely empirical methods. Phenomena such as Werner Heisenberg's "uncertainty principle" and "quantum entanglement" challenge the boundaries of classical determinism and necessitate the introduction of new metaphysical interpretations into scientific thought.²⁸

Furthermore, the metaphysical foundations of the scientific paradigm call into question the claim of absolute objectivity in science. The metaphysical assumptions underlying the production of scientific knowledge demonstrate that science itself is constructed upon certain philosophical presuppositions. This realization necessitates a revaluation of the rigid separation or ideological bias between scientific and religious knowledge.²⁹ Such an approach encourages a broader and more nuanced perspective, acknowledging the interplay between the metaphysical

²⁵ Yasar Ünal, "Din ve Bilimin Buluşma Noktası: Yasallık/The Meeting Point of Religion and Science: Legality", *İslâmî Araştırmalar (Dergi)* XXXII/2 (2021), 496-516.

²⁶ John F. Haught, *Science and Religion: From Conflict to Conversation* (New York: Paulist Press, 1995), 8-13.

²⁷ Naturalism is the claim that "everything is part of nature and can be explained using the methods and methodologies of the natural sciences." For definitions and discussions on naturalism, see. Kemal Batak, *Naturalizm Çıkmazı: Dennett'ten Dawkins'e Yeni Ateizm'in Felsefi Temelleri ve Teistik Eleştirisi* (İstanbul: İz Yayıncılık, 2017); Nicholas Bunnin - Jiyuan Yu, "Naturalism", *The Blackwell Dictionary of Western Philosophy* (Malden: Blackwell, 2004), 458.

²⁸ Hans Reichenbach, *Kuantum Mekaniğinin Felsefi Temelleri*, çev. Deniz Ölçek (İstanbul: Alfa Yayınları, 2014), 9-11; James T. Cushing, *Fizikte Felsefi Kavramlar*, çev. Özgür Sarioğlu (İstanbul: Sabancı Üniversitesi Yayınları, 2006), 151-153.

²⁹ Anjan Chakravarty, "Bilim Felsefeleri ve Bilimler Arasında Metafizik", çev. S. Ertan Tağman, *Dört Öge* 11 (2017), 183-199.

dimensions of science and the transcendent dimensions of religious knowledge, thus fostering a more integrative understanding of human inquiry.

The primary rationale behind the positivist paradigm's ideological stance of positioning religious knowledge outside the category of scientific knowledge is to weaken the essence, societal value, and epistemological significance of religious knowledge, ultimately aiming to eliminate its transcendental dimension.³⁰ This approach, however, leads to the questioning and testing of religious knowledge without offering an opportunity to reconsider its unique methodology and inherent value system. Building upon this, artificial intelligence reconstructs the concept of thought through specific rationalist and computational methods, thereby promoting the secularization -or, in other terms, the demystification- of thought, stripping it of its spiritual dimension.³¹

Based on the above evaluations of the foundations of AI-based thinking and evidence from studies in the literature regarding the use of AI in religious research,³² the following problems become evident regarding the production of religious knowledge³³ in this domain: (i) Neglect of the Metaphysical Dimension of Religious Knowledge, (ii) Methodological Differences, (iii) Epistemological Limitations, (iv) Issues of Shariah Compatibility, (v) Challenges in Interpretation and Meaning Production and (vi) Neglect of Context.

(i) Neglect of the Metaphysical Dimension of Religious Knowledge: Religious knowledge is not composed solely of rational and empirical data, as claimed by the secular and positivist paradigm. For instance, it encompasses dimensions such as revelation, inspiration, spiritual insight, intuition, mystical experience, and transcendental reality elements that the positivist paradigm is incapable of measuring or evaluating.³⁴ In this context, artificial intelligence, fundamentally reliant on the data and algorithms of this paradigm, processes knowledge within this framework. As a result, it faces significant limitations in comprehending and producing knowledge aligned with the transcendental/metaphysical dimensions of religious knowledge.³⁵

(ii) Ignoring Methodological Differences: The secular positivist methodology underlying the functioning of artificial intelligence is insufficient in understanding and interpreting the metaphysical and value-based dimensions of religious knowledge. This is because religious

³⁰ S. Ertan Tağman, "İslam Epistemolojisi Üzerine Bir İnceleme", *Dört Öge* 6 (2014), 71-86.

³¹ Leung, "The Picture of Artificial Intelligence and the Secularization of Thought", 457-460.

³² Randall Reed, "A.I. in Religion, A.I. for Religion, A.I. and Religion: Towards a Theory of Religious Studies and Artificial Intelligence", *Religions* 12/401 (2021), 1-16; Muhammed Yamaç- Nihal İşbilen, "Religion Paradigm of Artificial Intelligence", *İlahiyat Studies* 15/2 (2024), 233-253.

³³ Particularly considering that artificial intelligence is associated with Judeo-Christian apocalyptic discourses in the Western world and is portrayed as an instrument for humanity's salvation, it is academically imperative to evaluate this technology from a critical perspective within the framework of religious epistemology. See, Yamaç- İşbilen, "Religion Paradigm of Artificial Intelligence", 245-246.

³⁴ To explore examples of knowledge types outside the realm of scientific knowledge and their dimensions within Islamic thought, see, Yunus Emre Akbay (ed.), at all. *İslam Düşüncesinde Temel Kavramlar: Vahiy, İlham, Keşf, Sezgi, Fırsat ve Rüya* (Ankara: Sonçağ Akademi, 2023).

³⁵ To explore the fundamental types of knowledge utilized by AI-based computer systems in scientific research processes and the philosophical foundations underlying the act of conducting science, see. Şakir Kocabaş, "Yapay Zeka ve Bilim Felsefesi", *Divan: Disiplinlerarası Çalışmalar Dergisi* 36 (2014), 15-16.

knowledge is not confined to mere logical inferences, various forms of reasoning, or data analysis; rather, it is rooted in divine truths, spiritual experiences, and revealed knowledge.

(iv) The Issue of Shariah-Compliance: Artificial intelligence can process religious texts provided to it by employing methods such as semantic analysis, prediction, classification, and adaptation. It can even generate content resembling religious texts or make logical inferences about religious concepts. However, this production can never replace authentic religious knowledge. The Shariah authenticity of religious knowledge and its structure, which arises from the relationship between humans and the transcendent being, exists on a plane far beyond the capabilities of deep learning or machine learning systems.

(v) The Problem of Interpretation and Meaning Production: AI can analyze religious texts based on its underlying logical inferences and generate new texts through certain patterns. However, this production cannot encompass the divine meaning and spiritual dimension inherent in religious knowledge. The interpretation and understanding of religious knowledge necessitate effort (*jahd*), human experience, jurisprudential insight (*fiqh*), and spiritual comprehension, which are beyond the scope of AI's capabilities.

(vi) The Neglect of Context: AI can only determine the context of verses and hadiths when such context is explicitly provided to it. Consequently, producing religious knowledge based on foundational religious texts without accurately identifying their context introduces numerous challenges. Additionally, an essential consideration regarding context is the ability to distinguish linguistic, situational, and conceptual contexts. AI approaches context determination conditionally in all these areas. Ultimately, AI's ability to identify context in the production of religious knowledge is limited and varies depending on the type and complexity of the context, as well as the quantity and quality of the data it has been trained on.

Based on the limitations, the production and transmission of religious knowledge in AI-based systems in the modern world face the challenges posed by the secular positivist paradigm. Therefore, it is essential to develop new perspectives that address the challenges of the era - taking technological advancements into account- while maintaining caution. In this context, the following sections of the study will propose strategies to address these challenges.

1.2. Artificial Intelligence and the Production of Religious Knowledge in the Context of Transhumanism: An Epistemological Examination

Transhumanism, shaped as an extension of secular positivist thought, is built upon the ideal of transcending human biological and cognitive limits. In this context, the role of artificial intelligence in the production of religious knowledge and the influence of the transhumanist perspective on this process constitutes one of the significant areas of debate in contemporary thought. With the advancement of modern technology, it is evident that discussions on the relationship between transhumanism and artificial intelligence are also addressed in the literature.³⁶

³⁶ To explore comprehensive studies examining the relationship between artificial intelligence, religion, and transhumanism from various dimensions, see. Muhammet Kızılgeçit vd. (ed.), at all, *Yapay Zekâ, Transhümanizm, Posthümanizm ve Din Uluslararası Sempozyumu Özet Bildirileri Kitabı* (Erzurum: Atatürk Üniversitesi Yayınları, 2021);

However, the relationship between transhumanism and AI in the processes of producing, interpreting, and understanding religious knowledge remains limited in this body of work. In this respect, the impact of transhumanism on the production and interpretation of religious knowledge through AI needs to be examined more comprehensively and in all its dimensions.

The foundational arguments of transhumanism are based on core elements of secular Western thought, such as positivist rationalism, the mechanistic worldview, and the Darwinian biological perspective. In this regard, transhumanism advocates for the idea that humans are beings capable of being “enhanced” or “improved” through technological interventions, while tending to disregard the epistemic structure and metaphysical dimension of religious knowledge.³⁷ It lacks a human-centered approach, as AI conceptualizes the acts of “intelligence” and “thinking” in a format devoid of human involvement. As emphasized in Ahmet Dağ’s work, “A World Without Humans: Transhumanism”, who conducts significant research in the philosophy of technology and transhumanism, since transhumanism serves as a technological manifesto of secular positivist thought. Consequently, the possibility of producing religious knowledge within this framework must be both questioned and critically debated.³⁸

From another perspective, transhumanism’s desire for “immortality” and its tendency to “transcend biological limits” also conflict with fundamental concepts of religious thought. For instance, radical ideas such as enabling men to give birth through artificial wombs contradict the divinely defined human nature and the order of creation (*sunnatullāh*).³⁹ At this point, the role of AI in the production of religious knowledge becomes even more complex.⁴⁰

The impact of transhumanism and AI technologies on religious knowledge must be considered by centring on significant challenges such as “dehumanization,” “immortality,” and “transcending boundaries.” The use of artificial intelligence as “auxiliary tools” in the production of religious knowledge must also be approached from a human-centric perspective. The claim to preserve the unique character and transcendental dimension of religious knowledge while sidelining the human factor appears futile under current circumstances.

From this perspective, the irreconcilability between the transhumanist approach’s goal of transforming human nature and the fundamental principle of religious thought defines the limits of artificial intelligence’s role in the production of religious knowledge.⁴¹ In this context, the role of artificial intelligence and transhumanist technologies in the production of religious knowledge can only be considered within the framework of the fundamental principles of religious thought and the values intrinsic to religion. Otherwise, while benefiting from the

Muhammet Kızılgeçit vd. (ed.), at all, *Yapay Zekâ, Transhümanizm ve Din* (Ankara: Diyanet İşleri Başkanlığı Yayınları, 2021); Ahmet Dağ, “Posthuman Çap ve Posthumana Geçiş Aracı Olarak: Transhumanizm ve Transhuman”, *Yapay Zekâ, Transhümanizm, Posthümanizm ve Din Uluslararası Sempozyumu Özet ve Tam Bildiriler Kitabı*, ed. Muhammet Kızılgeçit vd. (Erzurum: Atatürk Üniversitesi Yayınları, 2021), 17-23.

³⁷ Sinan Canan, *İFA: İnsanın Fabrika Ayarları 3. Kitap / Sınırları Aşmak* (İstanbul: Tuti Kitap, 2020), 58-63.

³⁸ Dağ, *Transhümanizm: İnsanın ve Dünyanın Dönüşümü*, 11-13; Ahmet Dağ, *İnsansız Dünya Transhümanizm* (İstanbul: Ketebe Yayınevi, 2020), 17-20.

³⁹ The concept of “*sunnatullāh*” mentioned here does not refer to the natural laws governing the universe but rather denotes social laws/mechanisms in the sense of societal functioning.

⁴⁰ Dağ, *İnsansız Dünya Transhümanizm*, 103-104.

⁴¹ Dağ, *İnsansız Dünya Transhümanizm*, 21-29.

possibilities offered by technology in the processes of producing and interpreting religious knowledge, there is a risk of failing to preserve the unique character and transcendental dimension of this knowledge. Thus, is AI merely a tool of transhumanist and positivist approaches?

Yes, AI has become one of the most significant tools of both transhumanist and secular positivist approaches. This is because software-based mechanical perspectives and applications in transhumanist discussions are supported by artificial intelligence. Moreover, the neglect of religious and moral values in this process is also a notable reality. For instance, transhumanist instruments that could be utilized in military applications through AI technology hold the potential to fundamentally transform warfare technologies.⁴²

From another perspective, the relationship between artificial intelligence and transhumanism is not limited to technical dimensions. Among the social impacts of transhumanist technologies are the deepening of inequalities, deprivation of access, and the increase of moral and societal issues.⁴³ Inequalities that may arise among societies in benefiting from transhumanist possibilities will also undermine the concept of justice based on religious and moral values.⁴⁴ In this regard, the Darwinian approach inherent in AI-based thinking, which emphasizes concepts like “survival of the fittest” and “natural selection,” represents an implicit framework where societies capable of accessing, producing, and utilizing these technologies prevail, while others are excluded from this domain.

1.3. Artificial Intelligence as an Extension of Secular Hegemony and Post-Colonialism

The production and use of AI can be seen as a modern reflection of historical colonialism. From a post-colonial perspective, the global processes of production and consumption of artificial intelligence reveal the continuation of the West’s hegemonic dominance, both economically and politically.⁴⁵ In this context, Aníbal Quijano’s concept of the “Coloniality of Power” provides a broad perspective for understanding how AI technologies are shaped by Western-centric values and the production of knowledge.⁴⁶

Coloniality of Power refers to modern colonialism as not merely a physical process of colonization but as a hierarchical and systemic structure of power and relations encompassing all aspects of life, including knowledge production, culture, social structures, and economic systems. This system operates through domains such as historical context, the continuity of colonialism, race and ethnicity, knowledge production, economic superiority, and cultural hegemony.⁴⁷ In this regard, artificial intelligence technologies must not be overlooked as significant actors within the colonial power matrix. Why?

⁴² Dağ, *İnsansız Dünya Transhümanizm*, 124.

⁴³ Dağ, *İnsansız Dünya Transhümanizm*, 200-202.

⁴⁴ Yamaç-İşbilen, “Religion Paradigm of Artificial Intelligence”, 245-246.

⁴⁵ Rachel Adams, “Can Artificial Intelligence Be Decolonized?”, *Interdisciplinary Science Reviews* 46/1-2 (2021), 176-197.

⁴⁶ James Muldoon - Boxi A. Wu, “Artificial Intelligence in the Colonial Matrix of Power”, *Philosophy & Technology* 36/4 (2023), 80.

⁴⁷ James Muldoon - Boxi A. Wu, “Artificial Intelligence in the Colonial Matrix of Power”, *Philosophy & Technology* 36/80 (2023), 4-5.

Because within the colonial power matrix, AI sustains the continuity of colonialism by maintaining mental and structural interactions along the axes of power, knowledge, and resources through the algorithms operating in the background. Just as the colonial power matrix creates a hierarchy by utilizing racial and ethnic distinctions, artificial intelligence functions as a significant actor in this process. For example, facial recognition technologies produce significantly more accurate results for individuals with lighter skin tones compared to those with darker skin tones (99% vs. 65%).⁴⁸ Autonomous job application evaluation systems exhibit bias by considering factors such as race, religion, language, and even the countries visited by the applicant. Risk assessment algorithms used in judicial systems in Europe and across various fields in China demonstrate racial, religious, and even class-based discrimination based on residency. Similarly, large language-based applications express bias through racist, discriminatory, and partisan language in their translations and evaluations.⁴⁹ The bias in analysis and evaluations of language-based applications during the events in Gaza on October 7 is another example of this attitude.

The colonial power matrix also utilizes AI as a tool in the production of knowledge.⁵⁰ By centring the Western paradigm and universalizing it as the sole producer of valid knowledge and science, while marginalizing and devaluing other knowledge systems, this tendency is also adopted by artificial intelligence.⁵¹ For instance, when fact-based, value, morality, and faith centred analyses are conducted using large language model applications, the analysis often concludes with warnings such as, “These findings may not align with a scientific approach; you should conduct broader research.” This serves as an indication of this tendency.

The capitalist economic model emerged from colonialism and continues to sustain itself through center-periphery relationships. While countries at the center (North America and Western Europe) continuously develop and grow wealthier, peripheral countries (Asia, Africa, the Middle East, and Latin America) are exploited under the guise of being developed.⁵² The colonial power matrix employs artificial intelligence with a mission to serve this purpose by influencing economic indicators, perceptions of consumer behaviour, product preferences, and decision-making.⁵³ AI algorithms rely on large datasets, yet these datasets predominantly originate from the economic systems of developed countries. As a result, the economic realities of peripheral countries are often overlooked.⁵⁴

⁴⁸ According to a study conducted by MIT and Stanford researchers, facial recognition algorithms identified light-skinned men with 99% accuracy, whereas the accuracy for dark-skinned individuals dropped to as low as 65%. Additionally, Amazon's facial recognition system, “Rekognition”, mistakenly matched 28 U.S. Congress members with individuals in a criminal database. Most of those incorrectly matched were Black Congress members. For further details, see. Stephen Buranyi, “Rise of the Racist Robots – How AI Is Learning All Our Worst Impulses”, *The Guardian* (Access 12.01.2025).

⁴⁹ Anja Bechmann - Geoffrey C Bowker, “Unsupervised by Any Other Name: Hidden Layers of Knowledge Production in Artificial Intelligence on Social Media”, *Big Data & Society* 6/1 (2019).

⁵⁰ Muldoon - Wu, “Artificial Intelligence in the Colonial Matrix of Power”, 8-9.

⁵¹ Reed, “A.I. in Religion, A.I. for Religion, A.I. and Religion”, 1-16.

⁵² Abeba Birhane, “Algorithmic Colonization of Africa”, *SCRIPTed* 17/2 (2020), 389-409.

⁵³ Muldoon - Wu, “Artificial Intelligence in the Colonial Matrix of Power”, 11-13.

⁵⁴ Abeba Birhane, “Algorithmic Injustice: A Relational Ethics Approach”, *Patterns* 2/2 (2021), 1-9.

Artificial intelligence can also function as a tool of cultural hegemony, turning Western lifestyles, aesthetics, and cultural norms into global standards.⁵⁵ In these processes, where AI serves cultural hegemony, cultural practices belonging to the “other” (non-Western) are exoticized and suppressed. This is achieved by employing Western-centric datasets, popular culture, and media algorithms; personalizing user preferences to favor Western-origin products; spreading these preferences through advertising and marketing strategies; and generating knowledge in large language models that operate within an English-centric framework.⁵⁶ In all these areas, artificial intelligence acts as a significant agent, marginalizing societies and values outside the West.⁵⁷

1.4. New Approaches and Proposals to Produce Religious Knowledge Artificial Intelligence

For artificial intelligence to become a tool capable of resisting the secular positivist paradigm and the colonial power matrix in the production of religious knowledge, foundational steps such as strengthening local knowledge systems, designing ethical and just AI, and adopting an inclusive/holistic epistemology must be taken.⁵⁸ In this process, it is a prerequisite for Muslim societies to enhance their knowledge production capacities and develop AI technologies in alignment with their own values. In this context, new approaches and proposals for the use of artificial intelligence in the production of religious knowledge can be addressed under the following headings:

Adopting a pluralistic/holistic epistemic approach in the production of religious knowledge through artificial intelligence is essential. This is because the secular positivist paradigm operates solely with a materialist mindset, considering empirical data as the sole criterion while marginalizing other sources of knowledge (such as values, beliefs, and religion). To address this issue, AI must be designed to accept both empirical and religious/faith-based knowledge systems. Additionally, local and indigenous algorithms are required to ensure that contextual norms are not overlooked and that cultural ties with religious traditions are not severed. Following this integration, a comprehensive religious knowledge epistemology encompassing all theological approaches, including Islamic sciences, can be established.

Secondly, it is necessary to train AI models on indigenous and national datasets, as well as language models in languages such as Turkish and Arabic, to counter the biased and unilateral content of large language models originating from Western and secular paradigms. By training models in this way, data can be integrated with the relationship between language and context, allowing for the desired production of religious knowledge. Furthermore, data analyses should be conducted, and precautions should be taken against synthetic data.

⁵⁵ Adams, “Can Artificial Intelligence Be Decolonized?”, 176-178.

⁵⁶ R. Avila, “Against Digital Colonialism”, *Platforming Equality: Policy Challenges for the Digital Economy*, ed. J. Muldoon - W. Stronge (Autonomy, 2020), 1-13.

⁵⁷ Muldoon - Wu, “Artificial Intelligence in the Colonial Matrix of Power”, 13-15.

⁵⁸ Cihannüma, *Yapay Zekâ ve İnsanlığın Geleceği: Fırsatlar ve Tehditler*, 38-41.

In this regard, initiatives such as the “Turkish Large Language Model”⁵⁹ and the “Safir Big Data” infrastructure project, carried out in Türkiye under the auspices of TUBITAK (The Scientific and Technological Research Council of Türkiye) and the National Technology Initiative (Milli Teknoloji Hamlesi), are significant steps. Additionally, these processes, included within the scope of the “National Artificial Intelligence Strategy 2021-2025”, are being developed and supported through national policies.⁶⁰

Current AI algorithms reflect a Western-centric worldview in personalized experiences, evaluating religious knowledge from a secular perspective. In contrast, it is essential to design AI algorithms based on an alternative paradigm. In personalized knowledge design, AI should be trained using reasoning methods inspired by the methodologies of classical Islamic disciplines such as *fiqh* and *kalām*. Additionally, for validation methods, the *isnad* and textual criticism methodologies of *hadith* studies should be designed for integration into algorithms.

Fourthly, the limitations or biases in the production and dissemination of religious knowledge through AI must be eliminated. This includes digitizing religious education materials, developing *fatwā* tools, and teaching AI the methodologies for translating and interpreting religious texts. To achieve this, it is essential for structures established through collective wisdom to play active roles in the training of AI within the framework of a holistic and cooperative approach.

Finally, an equitable and ethical access policy must be established to eliminate access deprivation or limitations, ensuring the full participation of Muslim societies in the production of religious knowledge. In this regard, participatory technological development processes and strategies should be formulated and placed on the agenda of the Islamic world. Otherwise, there is a risk of religious knowledge being produced within an ideological framework belonging to a specific country, region, group, or sect.

The secular paradigm-based data structure of artificial intelligence, its algorithmic biases, ideological operational methods, and adoption of a hegemonic approach restrict the production of religious knowledge while supporting the production of information aligned with its own paradigm. In this regard, artificial intelligence prioritizes Western-centric knowledge systems in all areas, marginalizing alternative forms of knowledge and local values, thereby perpetuating digital colonialism. This makes the positioning of artificial intelligence not only as a technological tool but also as a social and political instrument more apparent.⁶¹ Following the above approaches and proposals, the next section examines how artificial intelligence can benefit from the classical methodological tradition in reasoning methods and outlines the framework it should adopt to produce religious knowledge.

⁵⁹ Zeynep Duyar, “Yapay Zekanın Türkçesini Geliştirecek ve Türk gibi Düşünmesini Sağlayacak Dil Modeli Geliyor”, Anadolu Ajansı, (Erişim 25 Nisan 2024).

⁶⁰ CDDO, *Ulusal Yapay Zekâ Stratejisi 2021-2025* (T.C. Sanayi ve Teknoloji Bakanlığı & T.C. Cumhurbaşkanlığı DDO, Ağustos 2021).

⁶¹ Muldoon - Wu, “Artificial Intelligence in the Colonial Matrix of Power”, 1-3.

2. The Possibility of Religious Knowledge Through AI's Reasoning Methods

Although some research has been conducted in recent years on the capacity of AI systems to understand and interpret religious texts, the topic has not yet been addressed at the desired level.⁶² AI operates as a systemic mechanism capable of performing unique reasoning processes by being trained through specific neural networks based on the algorithms it is given.

The reasoning capabilities of these systems concerning religious knowledge should be approached with new perspectives at the intersection of traditional interpretive methodologies (*uṣūl*) and modern technology. The foundational framework for this issue involves integrating specific reasoning methods in Islamic thought, such as *qiyās* (analogical reasoning), *istiḥsān* (juridical preference), and *istiṣlah* (public interest), along with general inferential methods like induction and deduction, into AI systems to establish a holistic epistemology. Indeed, the inferences AI systems make from texts resemble the methodologies of inference (*istidlāl*) found in classical *uṣūl al-fiqh* (Islamic jurisprudence methodology). However, these systems tend to rely on mathematical and statistical computations to work with much larger datasets and rapidly evaluate different contexts. What role should artificial intelligence play in deriving religious knowledge from religious texts? Before addressing this question, it is essential to examine the current reasoning methods of artificial intelligence.

2.1. AI in the Context of Reasoning Methods

Artificial intelligence is fundamentally built upon reasoning methods based on mathematical and statistical models. These methods are structured through an algorithmic process that encompasses learning from data, pattern recognition, and inference-making. Unlike the conscious and subjective reasoning process of the human mind, AI's reasoning method is a data-driven computational and optimization process. In this regard, AI processes large amounts of data to solve a specific problem or enhance its capability in a personalized task.⁶³ This process typically involves identifying patterns and making decisions based on these patterns. This process operates typically by identifying patterns and making decisions based on these patterns, thus making "predictions" by modeling relationships between data during the learning process or adapting to perform given tasks. The outcomes of these data-driven processes emerge through the training of complex neural networks using various mathematical techniques for prediction/adaptation algorithms.⁶⁴

Artificial intelligence employs embedded methods such as induction, deduction, and probabilistic/abductive reasoning in these processes. However, these methods are optimized for solving specific problems rather than mirroring human reasoning exactly. For instance, a machine learning model learns a statistical pattern based on past data to predict a future event.

⁶² Chaudhary, "Islam and Artificial Intelligence", 109-129.

⁶³ Alan Turing, "Computing Machinery and Intelligence", *Mind* 59/236 (1950), 433-460.

⁶⁴ Alan Turing, "Bilgişlem Makineleri ve Zekâ", trans. Füsun Doruker, *Akıl Gözü: Benlik ve Ruh Üzerine Hayaller ve Düşünceler*, ed. D. R. Hofstadter- D. C. Dennett (İstanbul: Boğaziçi Üniversitesi Yayınevi, 2005), 59-72.

However, since this learning process is entirely data-driven, it is limited in its ability to understand context or make decisions based on cultural or moral values.⁶⁵

The reasoning of artificial intelligence is typically shaped around an objective function. This is a goal-oriented optimization process aimed at achieving a specific performance criterion in the best possible way. For instance, a facial recognition system optimizes an algorithm that minimizes errors to accurately identify faces in photographs. However, this process does not consider moral, cultural, or contextual factors. Unless these factors are explicitly programmed or clearly specified within the data, AI has yet to demonstrate success in understanding or interpreting them. Moreover, as expressed in the previous sections, AI processes can be manipulated due to various motivations. From this perspective, AI's reasoning is significantly limited compared to human intelligence. While the human mind is shaped by intuition, emotions, past experiences, and cultural contexts, AI is confined to data and algorithms. Therefore, although AI reasoning is effective in improving performance for a given task, it does not possess human-like interpretation or cognitive thinking capabilities.

2.2. Reasoning Methods of AI in Relation to Religious Knowledge

Although the use of AI technologies in the production of religious knowledge currently faces certain limitations and challenges, it appears likely to become more advanced in the future.⁶⁶ Particularly with the development of large language models, image processing, and deep learning systems, AI may offer new opportunities to produce religious knowledge. However, integrating these advancements in a manner consistent with traditional religious knowledge methodologies is crucial.

At present, AI's reasoning processes focused on religious texts can be categorized into two classifications: general and specific. Generally, traditional reasoning methods (induction, deduction, and abduction) and, specifically, semantic analysis, contextual examination, and cross-referencing analysis hold potential for integration into the processes of religious knowledge production through AI.⁶⁷ In this context, the classification of AI's reasoning methods focused on religious knowledge, both general and specific, is as follows:

Induction: AI systems could use inductive reasoning methods to derive general principles from specific examples in religious texts. For instance, AI applications structured with large language models could identify similar patterns in hadith texts and deduce the general moral principles established by the Prophet Muhammad (peace be upon him).

⁶⁵ Katja Grace vd., "When Will AI Exceed Human Performance? Evidence from AI Experts", *arXiv*, (2017), 1-21.

⁶⁶ Russell and Norvig have extensively examined reasoning methods in artificial intelligence systems, while Mitchell has laid the theoretical foundations for generalization and reasoning mechanisms in machine learning through data, making significant contributions to the methodological framework of the field. For detailed information, see. Stuart Jonathan Russell- Peter Norvig, *Artificial Intelligence: A Modern Approach* (Pearson, 2010); Tom M. Mitchell, *Machine Learning* (New York: McGraw-Hill Education, 1997).

⁶⁷ Pearl has made significant contributions to artificial intelligence by developing the reasoning methods within the field through his causality theory, which mathematically models cause-and-effect relationships. For detailed information, see. Judea Pearl, *Causality: Models, Reasoning and Inference* (Cambridge: Cambridge University Press, 2009), 13-248.

Deduction: AI could utilize deductive reasoning methods in a manner similar to classical *usûl* to derive specific conclusions from general principles found in the Qur'an and hadith texts. For example, by applying universal principles (*kullî qawā'id*) to issues (*juz'î masā'il*), AI could generate responses using deductive logic akin to the classical methodology of *qiyās*.

Abduction: AI could employ abductive reasoning to generate the most plausible hypotheses to explain ambiguous situations in religious texts. However, this method, which resembles traditional approaches like *istiḥsān* and *maṣlaḥah* (public interest) in jurisprudential matters, must be verified within the framework of classical Islamic jurisprudence. Otherwise, it could lead to incorrect interpretations and opinions.

Semantic Analysis: Modern NLP technologies and large language models have shown significant advancements in analyzing the complex semantic structures of classical Arabic religious texts and identifying intertextual semantic relationships. This method could prove highly useful in text-centered knowledge production in religious studies.

Contextual Examination: While AI cannot yet analyze the historical, sociological, and linguistic contexts of religious texts to distinguish their temporal conditions and universal messages, it could develop such capabilities through training with relevant datasets.

Cross-Referencing Analysis: Advanced AI algorithms could detect networks of references across various Islamic sources, enabling the discovery of intertextual relationships and consistency analysis. In this context, both verification and the holistic interconnection of Islamic sciences could be established.

After discussing the reasoning methods that artificial intelligence could employ in the production of religious knowledge under the above headings, it is worth reiterating the following point: While artificial intelligence may have the potential to adopt specific methods for interpreting and deriving insights from religious knowledge, it will remain significantly inadequate in reflecting the essence of the texts that serve as the source of this knowledge and in addressing their spiritual dimensions. This is because a text-based analysis deals only with the visible surface of religious knowledge, leaving room for the neglect of its intrinsic meanings and metaphysical dimensions. In this regard, it would be more accurate and realistic to state that artificial intelligence cannot develop a fully comprehensive understanding of religious knowledge.

Conclusion and Recommendations

The rapid development of digital technologies and the widespread use of artificial intelligence have brought about a paradigmatic transformation in the production, access, and dissemination of religious knowledge. This transformation is not merely a technological innovation but has also been assessed as a process that effectively reshapes the impact of religious knowledge on societal and individual life. This complex phenomenon, which must be examined in its epistemological, methodological, and sociological dimensions, has introduced new transformations and challenges in accessing knowledge. The integration of epistemic access and digital transformation into religious knowledge has led to profound changes in traditional

understandings of knowledge and, consequently, in the production of religious knowledge with the proliferation of modern technologies.

Traditionally, religious knowledge was produced and disseminated through religious authorities or institutions. However, digital platforms have decentralized access to this knowledge, creating a significant area of transformation. In this transformation, the decentralization of religious knowledge production processes has emerged as a risk, opening the door to the visibility of alternative approaches outside the traditional sources of religious knowledge. This has necessitated the redefinition of scholarly authority in terms of religious knowledge, questioning the roles and knowledge hierarchies inherent in traditional religious understanding. Structures attributed as mechanisms for producing religious knowledge, such as *fatwa* councils, have faced the need to evolve into more diversified and complex entities in line with the dynamics of the digital age.

The potential methodological transformation in the production of religious knowledge through artificial intelligence will necessitate the integration of traditional methodological approaches into the process, forcing a profound change. The adaptation of traditional hermeneutical approaches to digital platforms will also provide an opportunity to address various fields of religious knowledge from a broader perspective. In this context, potential methodological innovations could include the application of algorithmic analysis methods to religious texts and the systematic organization of data (text) mining and textual analysis.

The potential contributions of AI to the production of religious knowledge and the possible areas of risk that may arise must also be examined. From this perspective, AI holds pragmatic potential in accessing religious knowledge and analyzing it. For instance, through big data analysis, the intertextual relationships of religious texts can be identified, allowing for a deeper understanding of the meaning of religious texts and facilitating the delivery of their message in all dimensions to people. Semantic networks among religious texts and the creation of meaning maps could enable a clearer understanding of the conceptual structures of these texts. Additionally, multilingual text analyses and comparative interdisciplinary studies could help address the commonalities and differences among various religious texts.

However, applying AI technologies to religious knowledge also carries certain risks. For example, the projection of algorithmic biases and ideologies onto religious texts could lead to misinterpretation and corruption. The loss of context in religious texts could result in neglecting their historical and sociological backgrounds, rendering them incomprehensible. Furthermore, the weakening of the authentic interpretative tradition linked to the divine dimension of religious texts through AI could reduce religious knowledge to mere text and superficialize its message. To address these risks, the following recommendations can be made:

Given the findings, it would be more accurate and realistic to assert that artificial intelligence cannot develop a comprehensive understanding of religious knowledge. Consequently, institutional measures must be implemented to ensure the healthy continuation of religious knowledge production and interpretation in the digital age. Religious institutions, such as the Presidency of Religious Affairs (Diyanet İşleri Başkanlığı - DİB), located in Türkiye, should develop digital transformation strategies and conduct initiatives supporting

technological integration. Raising awareness of the ethics of AI usage from a religious perspective, developing standards, and making these perspectives applicable are essential. In this regard, implementing widespread and ongoing education programs on digital AI literacy will help build societal resilience against new technologies. From another perspective, developing hybrid methodologies that combine traditional and modern approaches in the production of religious knowledge is necessary. Integrating traditional methods of religious knowledge production with AI technologies, strengthening critical thinking skills, and fostering an awareness that approaches knowledge more consciously are crucial steps. Muslim societies must play an active role in this field, both theoretically and practically, to mitigate the potential risks of AI in the production of religious knowledge and to use this technology in accordance with Islam's truth, justice, and human-centered worldview. It has been established that comprehensive and methodologically robust new research is needed regarding whether the epistemological problems emerging about artificial intelligence's capacity to process/produce religious knowledge originate from the quality of datasets or from the conceptual limitations of algorithmic architectures. Future studies on AI modelling that facilitate the production of high-quality religious knowledge will also enable Muslim societies to compete in this field.

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Humanity, Religion and Willpower in the Future of Technology: A Critical Approach

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Abstract

Technological advancements have profoundly influenced individual and societal life, marking a transformative period akin to the agricultural and industrial revolutions. Today, emerging technologies such as artificial intelligence, the metaverse, and transhumanism challenge human cognitive and biological boundaries, potentially reshaping social structures and belief systems. Religion, which has historically been central to social life and human meaning-making, now faces new discussions regarding how digitalization will affect religious beliefs and practices. The primary aim of this study is to examine the impact of digitalization-driven technologies on the social aspects of religion and to systematically categorize the perspectives of religious individuals' perspectives on these developments. A review of the existing literature reveals that while numerous studies address the effects of technology on personal belief systems, social structures, and cultural practices, research specifically focusing on how religious communities respond to these technological advancements remains limited. Generally, two dominant perspectives emerge in the literature: the utopian approach, which views technological progress as a beneficial tool for positive transformation, and the dystopian approach, which perceives technology as a fundamental threat to human nature and ethical values. However, this study goes beyond this binary framework to explore a third perspective, which neither wholly rejects nor unconditionally accepts technology but instead advocates for its conscious regulation. This perspective is termed the "willpower" approach, as it seeks to direct technology in alignment with ethical and religious principles. This research seeks to answer the following key question: How do digitalization-driven technologies impact the social dimension of religion, and how can religious individuals' responses be categorized? To address this question, the study employs a descriptive analysis method, systematically evaluating data obtained through a comprehensive literature review. The findings suggest that religious individuals and groups potentially have three main approaches to technology: (1) The Accepting/Utopian Approach argues that technology can facilitate religious practices and help faith reach broader audiences in the digital realm. Online worship, virtual temples, and digital religious platforms are examples that reinforce this positive outlook on technology. (2) The Rejecting/Dystopian Approach contends that technological advancements serve capitalist interests, undermine human autonomy, and threaten personal authenticity. Those in this group argue that transhumanist projects manipulate human nature through artificial interventions, raising significant ethical concerns. (3) The Willpower Approach advocates for a middle ground, emphasizing the need for ethical and faith-based governance of technology rather than its outright rejection or unconditional acceptance. Religious communities, particularly, are sensitive to ensuring that technological developments do not compromise human dignity, privacy, or family values. In conclusion, the study finds that religious individuals' responses to technology are diverse, shaped by varying concerns and expectations. The growing power of global corporations and techno-authoritarian structures raises significant concerns among religious groups. However, rejecting technology entirely is not seen as a viable option. Instead, the study highlights the importance of maintaining a balance that preserves human dignity and ethical values while engaging with technological advancements. Future research could explore the deeper interactions between

technology and religion, the societal acceptance of AI-driven religious applications, and the evolving role of faith in the digital age.

Keywords

Sociology of Religion, Philosophy of Technology, Artificial Intelligence, Techno-Power, Faith, Willpower

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Teknolojinin Geleceğinde İnsanlık, Din ve İrade: Eleştirel Bir Yaklaşım

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Öz

Teknolojik gelişmeler, tarım ve sanayi devrimleri gibi insanlığın tarih boyunca yaşadığı büyük dönüşümlerdendir ve hem bireysel hem toplumsal yaşamı derinden etkileyebilmektedir. Günümüzde yapay zekâ, metaverse ve transhümanizm gibi yenilikçi teknolojiler; insanın bilişsel ve biyolojik sınırlarını aşma iddiasında olup toplumsal yapıları ve inanç sistemlerini dönüştürme potansiyeline sahiptir. Özellikle din, tarih boyunca sosyal yaşamın merkezinde yer almış ve bireyin anlam arayışına yön vermiştir. Ancak hızla gelişen dijitalleşme süreçleri, dinî inanışların ve pratiklerin nasıl değişeceğine dair yeni tartışmaları beraberinde getirmektedir. Bu çalışmanın temel amacı, dijitalleşme temelli teknolojilerin dinin toplumsallığı üzerindeki etkilerini incelemek ve dindar bireylerin bu süreçte yönelik yaklaşımlarını sistematik bir şekilde sınıflandırmaktır. Mevcut literatürde, teknolojinin bireyin anlam dünyası, sosyal yapıları ve inanç sistemleri üzerindeki etkisini ele alan birçok çalışma bulunmasına rağmen dindar bireylerin yeni teknolojilere karşı geliştirdiği tutumların derinlemesine incelendiği araştırmalarda eksiklik bulunmaktadır. Literatürde genellikle iki ana yaklaşım ön plana çıkmaktadır: Teknolojik gelişmeleri olumlu bir değişim aracı olarak gören ütopyacı yaklaşım ve teknolojiyi insan doğasına ve etik değerlere yönelik bir tehdit olarak değerlendiren distopyacı yaklaşım. Ancak bu çalışmada, bu iki zıt kutbun dışında bir üçüncü yaklaşımın varlığı tartışılmaktadır. Bu yaklaşım, teknolojiyi ne tamamen reddeden ne de sorgusuz kabul eden, aksine onu bilinçli bir şekilde yönlendirmeyi amaçlayan “iradeci” bakış açısıdır. Araştırma şu temel soruya odaklanmaktadır: Dijitalleşme temelli teknolojiler, dinin toplumsallığını nasıl etkilemektedir ve dindar bireylerin bu süreçte yönelik yaklaşımları nasıl kategorize edilebilir? Bu soruya yanıt bulabilmek için çalışma, betimsel analiz yöntemi ile yürütülmüş, literatür taraması yoluyla elde edilen veriler sistematik olarak değerlendirilmiştir. Araştırma bulguları, dindar birey ve grupların teknoloji karşısında üç temel yaklaşım geliştirdiğini ortaya koymaktadır. (1) Kabullenici/Ütopyacı yaklaşım, teknolojinin dinî pratikleri kolaylaştırabileceğini ve inancın dijital dünyada daha geniş kitlelere ulaşmasını sağlayabileceğini savunmaktadır. Özellikle çevrimiçi ibadetler, sanal mabetler ve dijital platformlar, bu grubun teknolojiye dair olumlu bakış açısını destekleyen gelişmeler arasında yer almaktadır. (2) Reddedici/Distopyacı yaklaşım, teknolojik ilerlemelerin kapitalist çıkarlar doğrultusunda insan iradesini ve özgürlüğünü tehdit ettiğini, bireyin otantikliğini zedelediğini öne sürmektedir. Bu gruptaki bireyler, transhümanist projelerin insanın doğasını yapay müdahalelerle değiştirdiğini ve bu durumun etik açıdan büyük riskler taşıdığını savunmaktadır. (3) İradeci yaklaşım ise teknolojinin tamamen reddedilmesi veya sorgusuz kabul edilmesi yerine, etik ve inanç merkezli bir denetim süreciyle kontrol altına alınması gerektiğini ileri sürmektedir. Özellikle Müslüman düşünce geleneğine yaslanıldığında teknolojik gelişmelerin insan onuru, mahremiyet ve aile gibi temel değerlere zarar vermeyecek şekilde yönlendirilmesi gerektiğine dair bir hassasiyet olduğu görülmektedir. Sonuç olarak, dindar bireylerin teknolojiye yaklaşımlarının homojen olmadığı, aksine çeşitli kaygı ve beklentiler doğrultusunda şekillendiği belirlenmiştir. Özellikle küresel şirketlerin ve tekno-iktidarın hegemonik gücü, dinî topluluklar açısından endişe kaynağı olmaktadır. Bununla birlikte, teknolojinin tamamen reddedilmesi de gerçekçi bir seçenek olarak görülmemektedir. Çalışmanın temel çıkarımı, insan onurunu ve etik değerleri koruyacak bir dengenin sağlanması gerektiğidir. Gelecekte yapılacak araştırmalar, teknoloji ve din arasındaki etkileşimin daha derinlemesine incelenmesi, yapay zekâ

tabanlı dinî uygulamaların toplumsal kabulü ve dijital çağda inanç sistemlerinin nasıl yeniden şekilleneceği gibi konulara odaklanabilir.

Anahtar Kelimeler

Din Sosyolojisi, Teknoloji Felsefesi, Yapay Zeka, Tekno-iktidar, İnanç, İrade

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Introduction

Humans have become “homo faber” due to the functional use of the opposable thumb. Through the development of tools that serve as extensions of the body, they have gained the capacity to abstract themselves from their simple state in nature and construct a subjective cosmos or world, thus ontologically distinguishing themselves from other living beings. We can understand the reflection of this complexity in the “zoon politikon”, in other words, a naturally political being, and the construction of cities. In the Neolithic Age, collective settlement reached a significant stage in Çatalhöyük, located in central Anatolia. This development advanced even further with the construction of metropolitan cities such as New York, Istanbul, Dubai, etc. Human beings owe this civilised humanity to their ability to objectify their mental abilities - in modern language - to develop techniques. We call the informatic accumulation of technique, technology. In this text, the place of religion in the world of the future will be discussed based on the basic question “Where does technology, about which something new is talked about every day, take human sociality?”. In addition, it is intended to classify people's approaches to new technologies such as artificial intelligence and metaverse.

The phenomenon of religion, which is coexistent with humanity, still exists despite all the advances and explanations of science, since it is related to the cosmos, which cannot be known through sensory means and cannot be comprehended with the infinity of space. In this way, the resistance of religion leads to new secularisation paradigms.¹ As a matter of fact, despite modern predictions that confine religion to the private sphere of the individual, a large number of people who have not lost their interest in the transcendent perform collective actions. In this form, religion seems to continue to exist in the digital society. But can human beings lose their interest and sensitivity/feeling towards death, love and eternity? In recent years, technology-based discussions such as transhumanism, artificial intelligence, metaverse have brought a different dimension to the quality of human beings to establish civilisation, bringing along a new set of facts, impressions and doubts. Technique, which was functional in separating nature from its simple state and creating culture, has today brought it to the stage of abstracting even from the culture it has created. Rapidly increasing and closed-circuit technological developments have attracted the attention of many social scientists and prompted them to think more deeply about the process. The techno age literature, which has increased quantitatively both at home and abroad in recent years, is mostly similar to each other, but they are intellectual documents of the importance attributed to the subject.

The study is based on a theoretical discussion of the issues of value defence and technology-based social change, which is based on the discipline of sociology of religion. It should also be stated that the possibilities of social philosophy are utilised, as a third way is described that evaluates the issue of will from the perspective of religious sociality. The information obtained through literature review technique was categorised by descriptive analysis. This qualitative analysis follows a structured approach, beginning with the development of a conceptual

¹ Karel Dobbelaere, “Sekülerleşme Kavramı: Bütüncül Bir Perspektife Doğru / Towards an Integrated Perspective of the Processes Related to the Descriptive Concept of Secularization,” trans. Cemal Özel, *Journal of Islamic Research* 29 (3) (January 1, 2018), 667–682.

framework. Data are systematically processed, classified, summarized, and interpreted within a thematic structure. Cause-effect relationships are identified, and comparative analyzes are conducted when necessary.² The study emphasizes the internal consistency of categorized social perspectives on religion in the context of technological futures. Beyond utopian and dystopian approaches, a third perspective is introduced through a critical evaluation of technological developments based on Topçu's theory of will. Additionally, Heidegger's critique of technique, Foucault's concept of biopower, and Baudrillard's theory of simulation are employed to examine how technological advancements, power structures, and hyperreal representations shape contemporary techno-political and cultural dynamics. The study critically assesses societal responses to technology-driven transformations within the frameworks of sociology and philosophy, adopting a confrontational perspective to analyze their broader implications.

1. Technological Construction of Society

It is possible to call the technology-orientated transformation experienced with the following of the industrial revolution as the “post-industrial age”³ with reference to Touraine. Since the speed of mass dissemination of information attracts attention in the social change experienced, the concept of “information age”⁴ is also commonly used. In reference to the pluralisation of truth claims, the notions of “postmodern age and post-truth age”⁵ are also used. When the process is considered in the focus of the nature of the tool affecting human existence, it will be necessary to discuss the digitalisation underlying new technologies. The dominant role of digitalisation in storing information, processing it through the will to power and transforming society necessitates the conceptualisation of the “Digital Age”. This is because new technologies are based on digitalisation. Computer technology has been achieved by operating the logic of transcribing, storing and transmitting information into digital data through chips, which are an improved version of transistors. The course that culminated in the creation of a social networks by the Internet is today crowned with artificial intelligence technologies. The society affected by this process is the “digital society” where traditional structures have changed dramatically. With the sharpening of the management capabilities of artificial intelligence, society will perhaps evolve into an “artificial intelligence society” in the future.

It is known that the culture produced by society gains a certain dynamism and acquires a tradition and a distinct structuring that transcends generations. It is stated that with the internalisation of new technologies by society, a new cultural transmission will arise, and thus the speed of cultural diffusion will increase in proportion to the technology used.⁶ However, what is in question here is the culture specific to “modern times”, which has gained certain constants and whose weight is felt on socialisation. However, in the digital age, we witness a

² Ali Yıldırım - Hasan Şimşek, *Sosyal Bilimlerde Nitel Araştırma Yöntemleri* (Ankara: Seçkin Yayıncılık, 2008), 224.

³ Alain Touraine, *The Post-Industrial Society; Tomorrow's Social History: Classes, Conflicts and Culture in the Programmed Society* (New York: Random House, 1971).

⁴ Manuel Castells, *The Rise of the Network Society* (John Wiley & Sons, 2011).

⁵ Fredric Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham, NC: Duke Univ. Press, 2003); Gopal Krishna Sharma, “The Post-Truth Era: An Analysis With Reference To Contemporary Politics,” *Dehradun Law Review* 11/1 (2019), 1–6.

⁶ Marshall McLuhan, *The Gutenberg Galaxy - The Making of Typographic Man* (USA: University of Toronto Press / Glenbow-Alberta Institute, 1968).

dramatic shift that does not allow for the internalisation of society and the rapid erosion of tradition. Each of the above-mentioned concepts, each of which refers to a period, is dragging the world into a position that requires urgent measures to be taken when we think problem-oriented.⁷ On the other hand, the process needs to be well analysed in order to take advantage of the opportunities that will arise in this rupture on behalf of the society and to manage them rationally.

About half a century has passed since the publication of Baudrillard's book "Simulacrum and Simulation".⁸ The "hyperreality" mentioned by the philosopher is clearly felt in all social areas today. Our representations that exist in the cyber universe, where copies do not need the original, have started to be used with such intensity and prevalence that they constitute an alternative to the physical world. In this respect, virtual geographies intertwined with transformations that challenge our perception of time-space have started to emerge. Apart from the physical and concrete geography we live in, today we are also in an abstract geography that corresponds to Foucault's concept of "heterotopia"; we make our economic, social and cultural needs exist here. The borders, which are said to have disappeared, are in fact only evaporating and reappearing in a condensed and fluid form in another form.⁹ The people of the age contribute massively to this transformation by consuming the technological devices offered to them. In this way, an alternative to nature-human interaction emerges in the form of "technology-human". Although the emergence of virtuality by information technologies has been realised with the human mind, today it seems that a different social plane will emerge with the guidance of artificial intelligence. Simulated spaces far from natural reality are an open intervention to sociality in the traditional sense. Considering the ability of AI to manipulate the human mind with a focus on consumption, It can be argued that uncertainty about the future of society has increased. Digital systems, which have not yet reached sufficient prevalence, can be considered to be beyond collective human control due to their inherent potential for self-sustaining and autonomous functionality. Yeşilmen claims that as a result of these transformations, which he bases on "closed consistency", "the technological hinterland will result in the triumph of secularism".¹⁰

Modernity, which was also a philosophical movement, brought with it a new epistemological paradigm. Many of the philosophers of the Enlightenment were opposed to religion, which they saw as the source of traditional knowledge. As a result of secularisation, one of the process components of modernity, humanity would be equipped with scientific knowledge far removed from religious knowledge.¹¹ The origins of artificial intelligence and the metaverse based on scientific evolution can be sought here. Transhumanism can also be seen as a modern expression of ancient and intercultural aspirations to radically transform human existence, both socially

⁷ Faruk Karaarslan, "Ahlak ve Din Anlayışı Bağlamında Emile Durkheim'ı Yeniden Düşünmek," *Bilimname* 52 (October 31, 2024), 174.

⁸ Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (University of Michigan Press, 1994).

⁹ Semra Ağaç Sucu - Uğur Gündüz, "Kitlelerin Yeni Göç Mekânları Olarak Sosyal Medya ve Sanal Göç İlişkisi," *Uluslararası Kültürel ve Sosyal Araştırmalar Dergisi* 5/2 (December 27, 2019), 470.

¹⁰ Halit Yeşilmen, *Teknolojik Hinterland ve Din - Sekülerizmin Dijital Zaferi* (Çizgi Kitabevi, 2022).

¹¹ Volkan Ertit, "Evrenselleştirilmiş Klasik Sekülerleşme Teorisi," *Mustafa Kemal Üniversitesi Sosyal Bilimler Dergisi* 11, (27), 103-120., (October 22, 2014), 110.

and physically.¹² On the other hand, despite being exposed to postmodern loneliness, people's need for socialisation has never diminished, and some experiences of transcendence have emerged from this sociability. Moreover, life practices such as religion are being reconstructed in the technological universe. Pragmatic, progressive, capital-oriented people, who approach this need with marketing intelligence, want to turn the situation into an opportunity and a new world vision/view emerges. Cybernetic environments render our emotional aspects artificial and open to manipulation.

2. Is Technology Continuity or Rupture in Terms of the Sociality of Religion?

There is data indicating that the traditional way of communication between people has changed radically. Reading the data in a sociological sense, a new cultural language based on technology is emerging. Social changes throughout history can be read through language changes. There have been differences in the nature of language and the way it is communicated over time. The digital effects of the media language associated with the meaning of “medium” also affect social interaction. Digital media seems to have turned into an arena where different thoughts and lifestyles are voiced. Even religion, with its substructure based on language, cannot be considered independent of such social changes. In this case, it will be necessary to talk about differentiations in the understanding of religion/forms of religiosity that progress within the framework of the media's own rules. On the other hand, throughout history, religion, as an indispensable phenomenon, has always been able to build a sand (discourse) pool where it can live. Religion, which mostly expresses itself by leaning on tradition, has also spread to media such as books, magazines, radio and television, and as society changes, it has been able to fortify its field by establishing the constants that society needs and provide continuity in new forms. Therefore, it can be expected that religion will find a place in internet-based systems, albeit in different forms.

Digital churches, temples, and congregations are now a reality thanks to the adaptability of religion, which can take on new forms in new environments. Online prayer and worship is a prime example of this transformation. Digital dhikr devices(dhikrmatics), religious chats, electronic pens that read scripture, prayer rugs with sound and compass, digitally shared prayers and congratulations, creatively designed obituaries and condolence notices, and youtuber preachers are all indicators of religious digitalization and new religious language. The term “digital religion” is also used for this internet-mediated phenomenon. This is a sociologically defined religious phenomenon, not religion with essentialist claims about the sacred in a theological sense. In such a framework, Campbell defines this phenomenon as “a new religion created through digital media and culture” as a way of living and practicing.¹³ This phenomenon can exist within a social network with its own law in religious terms.

¹² Talip Demir, “Kutsal Olan Her Şey Buharlaşıyor mu? Z Kuşağının Değer Yöneliminde Transhümanist İzler,” *Marifetname* 9/1 (June 30, 2022), 121.

¹³ Heidi Campbell, *Digital Religion: Understanding Religious Practice in New Media Worlds* (Routledge, 2013), 3.

In Janmohamed's words, the world connected by the Internet is becoming a “dârü'l Internet”, where the distinction between time and space disappears.¹⁴ Religious discourses will undoubtedly “add their own colour” to these unfamiliar, even incomprehensible spaces. The change in religious socialisation is clearly visible in the digital society. Moreover, when new technologies are integrated with religious practices, it is clear that those who design this technological infrastructure can significantly influence religious beliefs. When we consider religion as a process theology, it becomes clear that new technologies create a unique cultural environment that analog devices simply do not offer. On the other hand, the “society of the spectacle”¹⁵ Debord speaks about is at odds with the calm, soul-nourishing logic of religion. The emphasis on the eyes, seeing, and being seen marks a significant departure from traditional religious practices. Ancient religious cultures, based on the fundamental principle that “the eyes cannot see the truth”, may find their willpower significantly diminished as they adapt to these new rules.

The atmosphere of unpredictability and skepticism about the sociality of religion in the context of digital society has led to the emergence of two approaches to the subject, one accepting and one rejecting. These two approaches, which also manifest themselves in works of art, give rise to opposing views. For some, cyberspace is a paradise that we fit into our earthly life. There are those who claim that replicas that have gained consciousness transfer will evolve into posthumans (posthuman species), thus opening the door to eternal life in “earthly paradise”. Others see new technologies as the end of human freedom, as a giant prison — the panopticon. They believe we may be the last thinking generations. From a religious perspective, warnings about the hereafter and the afterlife are intended to regulate our behavior in this world.¹⁶ The weakening of the awareness of death and the hereafter through technology endangers the social existence of human beings. For without creating ideals, society will neither be able to create itself, nor will it be able to repeat this creation when necessary.¹⁷

Whether we call it utopia or dystopia, the claims that we are at the dawn of a new age cannot be ignored. Even if they have the same intention, the person who counts stones, says the rosary or uses a dhikrmatic will not be the same person. As a matter of fact, the consciousness that will build digital temples and worship there will not be the religious consciousness of today. Even if very few of the predicted changes materialize, we can think that living religions will be caught in a vortex and will have to make concessions from tradition.¹⁸

Even when technology is seen as an abstract concept, it becomes a social agenda. Everyone, young and old, feels its impact on their lives. Technological tools are followed from production to consumption, and pages and pages of reviews are written about new products, dozens of videos are shot. New technologies, unknown in traditional life, are now visible in almost every

¹⁴ Shelina Janmohamed, *M Nesli: Yeni Müslüman Gençlik*, trans. Seda Darcan Çiftçi - Esin Kızılcıma (İstanbul: Kaktüs yayınları, 2018), 107.

¹⁵ Guy Debord, *The Society of the Spectacle*, trans. Ron Adams (Cambridge, Massachusetts: Unredacted Word, 2021).

¹⁶ Abdulvahid Sezen, “Bireyin Ölümsüzlük Arayışı Bağlamında Transhümanizmi Düşünmek,” *Transhümanizm & Posthümanizm, Disiplinler Arası Bir Yaklaşım* (Ankara: Eski Yeni Yayınları, 2021), 134.

¹⁷ Emile Durkheim, *Dini Hayatın İlk Biçimleri* (İstanbul: Eski Yeni Yayınları, 2011), 568.

¹⁸ Hasan Sarı, “Manevi Arayışta Teknolojik Yönelim,” *İslam ve Medya* (January 20, 2022).

neighbourhood. It is possible to divide people's view of technologies with digital infrastructure into two on a functional basis. In addition, a third approach can be added to this classification, which can be derived from the tradition of Muslim thought. For those who belong to a religion such as Islam, which sees the willpower as the basis of responsibility, can be expected to develop actions in this area.

2.1. The Accepting View: The Possibility of Religion as Technology Evolves into Transhumanance

The novel and cinema are two arts that effectively reflect possible future events. Authors, screenwriters and directors have blended their sociological insights with real-world experiences to create works visions that are either optimistic or pessimistic of the future. Here are some well-known novels relevant to our topic: *Brave New World* (Huxley), *Utopia* (More), 1984 (Orwell), *Neuromancia* (Gibson), and *Dune* (Herbert). As for movies, *The Matrix* (Wachowski), *Ready Player One* (Spielberg), *The Island* (Bay), *Terminator* (Cameron), etc. These texts provide us with valuable clues about the new lifestyles that society can adopt with technology. Utopian works depict human life and the environment as ideal worlds characterised by luxury, comfort, harmony and practical convenience. Those that depict monstrosity and dehumanisation through chaos, mechanisation and technological singularity are dystopian.¹⁹

It is noteworthy that artworks expressing optimism have received relatively comparatively less attention. This can be considered one of the factors contributing to concerns regarding the role of technology in social life. However, the fluidity and dynamism of technology excite certain groups who seek to transcend the present and explore new possibilities for the future. For instance, the transhuman is perceived as more advanced than the ordinary human due to their utilization of genetic engineering, psychopharmacology, anti-aging therapies, neural interfaces, advanced information-management systems, memory-enhancing drugs, wearable computers, and cognitive techniques.²⁰ Lewandowski, a former Google engineer, has also suggested that artificial intelligence could take on a divine dimension, potentially enhancing societal well-being.²¹

The term “utopia” means “non-existent place”, as it originates from the negation of the Greek word *topos*, meaning “place”. It represents an imagined ideal society, reflecting both dissatisfaction with the present and a desire to surpass it. Technology, driven by human imagination and reason, continually pushes boundaries, reshaping how we perceive time and space. In parallel to the physical world, a new, multidimensional reality is being constructed for those seeking alternative experiences. When comparing these two realms, it is important to recognize that the physical world has certain limitations compared to the cyberspace. One of these is that reality cannot always match the boundless nature of human imagination. Sensory elements such as visuals, scents, tastes, pleasure, and sound cannot always be experienced exactly as desired, in the right place, time, or form. The human pursuit of art, which sets us apart from nature, likely stems from this very need. Before the technological advancements of the 21st

¹⁹ Ahmet Dağ, *İnsansız Dünya Transhümanizm* (İstanbul: Ketebe Yayınları, 2020), 170.

²⁰ Dağ, *İnsansız Dünya Transhümanizm*, 26.

²¹ Mark Harris, “God Is a Bot, and Anthony Levandowski Is His Messenger,” *Wired* (September 27, 2017).

century, people sought emotional and sensory fulfillment in various ways. However, the cyberspace, with its vast possibilities and customizable structure, now offers new ways to achieve these experiences, particularly in terms of sound and imagery.

Virtuality offers another significant advantage: ecological sustainability. In the modern world, human activity has increasingly disrupted natural ecosystems, often likened to a virus consuming its host. Experiencing natural beauty requires great effort in our modern urban lives. Humans leave behind huge wastes and cause irreversible problems with the industrial revolution in pursuit of their desires. In contrast, the appeal of virtuality is amplified by the ability to enhance images with elements not present in reality. The content created in cyberspace is sterile and environmentally protective. When this digital world surpasses the physical world, people develop psychological reactions such as escaping from the social environment. Humans seek to fill the gaps in their nature with technology. The conveniences that AI brings/will bring to our lives will alleviate many of the tasks we have to do today and perhaps make us forget them for the next generations. Digital technologies in vocational education environments eliminate the inherent risks and difficulties encountered in experimentation. Just as virtual rooms are designed for users, every data containing experimental processes can be designed. This allows for the efficient and cost-free repetition of difficult or dangerous training processes.²²

Elon Musk's neurotechnology company, Neuralink, has successfully implanted a brain chip in a paralyzed patient, enabling him to play chess using only the power of thought. Arbaugh, 29, paralyzed from the shoulder down in a diving accident, played chess on his laptop and moved the cursor using the Neuralink device. Neuralink is presented as a system that aims to treat conditions such as paralysis and blindness and improve the quality of life of people with disabilities thanks to microchips.²³ Ear implant surgeries are already being performed for the hearing impaired, and congenital deafness has been reduced to a manageable health problem, especially in the last three decades.

Technology offers clear solutions to make life easier for religious practitioners facing obstacles. For instance, new technologies will allow individuals to learn sacred texts in their original languages in individualized environments. Likewise, the experience of holy places can be simulated for religious people who want to perform pilgrimage, regardless of their religion. The digitization of sacrifice is already a reality. Individuals can slaughter the sacrifice they watch on the screen or have never seen by proxy through digital channels. Zakat and charity can also be performed in the same way. Some religious communities organize their daily, weekly, or monthly meetings on digital media. To boost motivation, religious texts are read in the same way to address in-groups and out-groups simultaneously. Even the sermons of artificial intelligence robots have started to be utilized. An example of this happened in Nuremberg, Germany. The German Evangelical Church Congress organized an event that attracted great interest. The church service was presented on screen by four different avatars. Under the slogan

²² Hamit Kamer - Adnan Algül, "Dijitalleşmenin Dini Hükümlere Etkisi: Metaverse Örneği," *Şırnak Üniversitesi İlahiyat Fakültesi Dergisi* 30 (June 15, 2023), 41.

²³ Mariko Oi, "Neuralink: Musk's Firm Says First Brain-Chip Patient Plays Online Chess," *Bbc.Com* (Accessed January 20, 2025).

“Now is the time”, the event's main theme was reported to be “moving forward, overcoming the fear of death, and keeping faith alive”.²⁴

Thanks to the phenomenon of digital religion, the image of Jesus today has a Facebook page where he can explain himself, the Cosmic Buddha can tweet, Muslims can easily locate the Qibla with many Android applications, and a Catholic cardinal can remotely attend church council meeting with the Pope using the Zoom app.²⁵ In 1992, godweb.org, a website founded by Presbyterians, became the first technological temple with its digital infrastructure.²⁶ Again, there are religious groups that view and support transhumanism from the perspective of improving the human condition. The Mormons, who say their mission combines science, technology, and religion, founded their first transhumanist society in 2006, according to the website “transfigurism.org”.²⁷ The Catholic Church is also known to have a positive attitude toward digitalization. In a high-investment collaboration with Microsoft, the Church brought St. Peter's Basilica in the Vatican online using artificial intelligence technology.²⁸ It has also been observed that the online activities of priests affiliated with the Church have been negotiated with various aspects in terms of religious authority.²⁹

There are those in the Islamic world who have a positive attitude toward the digital world for the sake of the faithful. As a matter of fact, the religious authorities in Türkiye are making plans to continue their mission and are putting it into action with a clearly observable desire. For this purpose, the number of online communities, which have acquired the character of “online religion”³⁰, is increasing every day. These groups consider technology, which reinforces their existence, as a sine qua non of their religious life. In addition to religious organizations with different views and opinions and of different sizes, the online activities of the Diyanet İşleri Başkanlığı can be evaluated for the purposes of guidance and notification in this context.

While the relationship of the religious to technology is encouraged, there is optimism that religious discourse can somehow be spread through the use of technology. In this approach, technology and religion can create a new atmosphere of spirituality. The most notable argument in this regard is the transformation of sacred texts into stones, tablets, then scrolls, then books in subsequent centuries, and now digital interfaces. If religious practices are popular in social media environments, this can certainly be seen as a positive development for religion. According to accepting approach to technology, it is very important, even obligatory, to be there to prevent the degeneration of generations on the Internet. Institutions and organizations representing

²⁴ Birrell, “Hundreds Attend German Church Service Led by Avatars - Premier Christian News | Headlines, Breaking News, Comment & Analysis,” *Premierchristian.News* (Accessed January 20, 2025).

²⁵ Mustafa Alıcı, “Metafizik Kutsallıktan Sanal Gerçekliğe: Dijital Din,” *AKRA Kültür Sanat ve Edebiyat Dergisi* 10/27 (May 16, 2022), 258.

²⁶ Godweb, “About GodWeb,” *GodWeb* (2024).

²⁷ Mormon Transhumanist Association, “Humanity Transfigured” (2024).

²⁸ vaticannews.va, “AI Offers Pilgrims and Visitors Enhanced Experience of St. Peter's Basilica,” *Vatican News* (2024).

²⁹ Heidi Campbell, *Digital Creatives and The Rethinking of Religious Authority* (Abingdon, Oxon ; New York, NY: Routledge, 2020).

³⁰ Christopher Helland, “Online Religion as Lived Religion. Methodological Issues in the Study of Religious Participation on the Internet,” *Heidelberg Journal of Religions on the Internet*. 1/1 (2005).

religion should not leave this channel unattended in order to protect their followers.³¹ Techniques or technology are not bad in themselves. The way they are used and their purpose will also determine their religious implications.

2.2. The Rejectionist View: “The Last Thinking Generations and Savage Machines”

Claims about the transhuman evolution of human beings through technology bring a completely different form of existence onto our discussion agenda. Even if technological machines connected to AI datasets could create and manage companies on their own, they currently lack human consciousness, will, awareness and related characteristics such as fear, love and empathy.³² A digital singularity without human willpower and consciousness inevitably turns the religious into “concerned conservatives” and leads to dystopian interpretations.

Western societies, which began the information revolution after the modern era, now build their lives largely around technology. It is believed that social institutions, from art to health care, from architecture to security, cannot function without technology. Moreover, the use of technology is perceived as a level of development, and societies that cannot reach it are considered “backward”. For those with a dystopian approach to technology, on the other hand, this is a sign of poisoning. As is well known, dystopia is the social expression of individual fears and anxieties about the future. Already in antiquity, Plato, while evaluating a myth about the invention of writing as a technique, presented technology in general as a poison/medicine: “A pharmacon, the measure of which is antidote, the excess of which is poison.”³³ In the bioconservative view, technology is an effective tool, but also a deadly weapon in the wrong hands or used uncontrollably.³⁴ It may be useful to recall that Pokemon, one of the most popular cartoons with children in the 90s, was taken off the air after a four-year-old boy jumped from the 7th floor saying “I am Pikachu”.³⁵ It is possible that technology that can be effective in the world of children can also cause problems for adults by breaking the link between the real and the virtual through addictions such as gambling and gaming.

While the technologies promoted by transhumanists appear to be aimed at improving health and well-being, a closer look reveals serious ambiguities. This mystery, this ambiguity behind the fog, inevitably leads to speculation: Will technological devices condemn human beings to themselves with their characteristics, capable of mortgaging human willpower? Will a system that has formed its own legal personality function independently of human beings? How will power relations be determined in the future of technology? These questions lead to the production of prophecies about the power of machines. This is because scientific developments in human biology seem to have moved beyond the goal of “knowing” human beings to the goal

³¹ Mustafa Yiğitoğlu, “Religious Virtual Living and Metaverse on the Real World,” *Afro Eurasian Studies* 10/1 (April 20, 2022), 11.

³² Yıldray Sipahi, “Algoritmik Perspektiflerin Kesişim Noktalarında Din ve Hukuk: Dijital Dönüşümde İradenin Değişen Yüzü,” (August 26, 2023), 1021.

³³ Şevki Işıklı - Mert Küçükvardar, *Bilişim Devrimi, Teknolojinin Felsefi ve Sosyolojik Analizi* (İstanbul: Kedidedi Yayıncılık, 2024), 190.

³⁴ Enfal Erkan, “Transhumanist Elements in ‘Understand,’” *Current Perspectives in Social Sciences* 28/2 (June 22, 2024), 205.

³⁵ Webtekno, “Pokemon’u Yayından Kaldırtan Çocuğun Günümüzdeki Halil,” *Webtekno* (April 18, 2018).

of controlling them.³⁶ Bio-power, which Foucault describes as a form of disciplinary power by approaching the human body as a machine, can also be considered in this context. The aim of this form of power, called the anatomy-politics of the body, is to discipline the human body, develop its abilities, make it more efficient and docile, and integrate it with economic control systems.³⁷ Another related concept is “singularity”. The technological singularity refers to a period when artificial intelligence and other advanced technologies will surpass human intelligence, leading to irreversible and unpredictable changes.³⁸ The ability of artificially intelligent machines to act and make decisions on their own by combining their capabilities is the nightmare of dystopians. In this case, the point of contention is what kind of evils such a technology with such potentials will cause with the changes it makes in the field of human life. So much so that the manipulation of the human mind by artificial intelligence has given rise to rhetorics such as “we are the last thinking generations” and “wild machines will destroy us”. Undoubtedly, such debates are considered “popular debates” due to the influence of Hollywood films on the social imagination, but the horrors of the Second World War, which are still fresh in people's minds, increase pessimism about the future.

Consumption is now the triangulation point of societies dominated by the sophisticated techniques of capital. The consumption cycle dominated by AI may undesirably increase the control of certain circles over the population. People no longer seek peace in the physical world, which has lost its appeal. Instead, they turn to the “dârû'l Internet” (cyberspace), a digital realm that has transformed into a vast marketplace, captivating users with its immersive visuals. Search engines can offer users thousands of options with the help of “big data”. The mind is overstimulated and even numbed by the informatic bombardment. Content based on emotion rather than reason can be brought to the fore. In this way, it can be argued that new technologies use a kind of distraction tactic, diverting people from their intended goals or rendering the subject purposeless. Is the society run by algorithms deliberately being turned into a society that cannot be itself and is therefore likely to have identity problems? And while humans are making the virtual world mentally and physically acceptable, are robots and avatars becoming human? It is likely that in cyberspace it will not be possible to understand who are avatars of real personalities and who are robot avatars. If we accept that our wills have been distorted, the result will be a non-value based society where authentic identity is lacking.

It is clear that the use of technological powers by egocentric individuals who have lost their values is another situation that critics of transhumanism fear and its proponents must avoid.³⁹ The digital transformation promised to those who take a utopian approach to technology has the potential to radically change the constants of religion. Furthermore, the actions of multinational corporations regarding the future are likely to evolve into a rigid imperialism as digitalisation accelerates. Investments in the metaverse, AI and transhuman exceed even the national product of many developing countries, and media networks and the economic sphere

³⁶ Mustafa Tekin, “Transhümanizm ve Posthümanizm Bağlamında Din ve Toplum,” *Transhümanizm & Posthümanizm, Disiplinler Arası Bir Çalışma* (Ankara: Eski Yeni Yayınları, 2021), 154.

³⁷ Michel Foucault, *Özne ve İktidar*, trans. Işık Ergüden - Osman Akinhay (İstanbul: Ayrıntı Yayınları, 2021), 16.

³⁸ Necmi Karslı, *Yapay Zekâ ve Din* (Ankara: İlahiyat Yayınları, 2024), 73.

³⁹ Erkan, “Transhumanist Elements in ‘Understand,’” 207.

are increasingly coming under the control of global capital. The crisis caused by the imperialism of digitalisation is particularly focused on the economy, and the use of cryptocurrencies can be added as a specific example. Cryptocurrencies, despite not being controlled by a centralised state system, will enable the rich to control cyber circulation.⁴⁰ This will further distance us from the ideal of “fair distribution”. The result will be a growing perception of deprivation in peripheral countries, unmanageable economic crises, continental migrations and social and environmental crises, all of which will lower living standards.

New technologies presents information to people in the desired way and speed through “big data”. It uses the historical accumulation of human beings, but there is a fear that this accumulation will now be touched by a non-human initiative, which would be an extraordinary articulation to existence. We may have come to the end of the accumulation of civilisation. Technology, which rapidly delivers information and facilitates transportation and information services, is now loudly proclaiming that our material and spiritual assets are rapidly disappearing, consumed and commodified. We must consider the role of religious communities and religious entrepreneurs in producing commodity universes, as “every supply creates its own demand”. Baudrillard's theory is clear: the media, long since having ceased to be a signifier and having become its own signifier, is the dynamo of all these transformations. The media preacher who claims to explain religion actually shows himself and his belonging as the main concern. The possible religious identities in the meta-universe -even if they claim authenticity- will probably take on a different structure from the original.⁴¹ In this case, a religious identity detached from its nature and context will not survive.

The media logic and the attractiveness of opposites quickly expose religious sinners. Claims of unlimited sexuality find a wide area of acceptance. Mobile applications such as OnlyFans, Tinder and Azar, which have negative connotations for the religious, are perceived as a serious attack on the institution of family, which is the centre of religion. The widespread use of technology, which is claimed to cause moral decay, has also left the religious with a moral challenge. Indeed, a murder case in Istanbul in October 2024 contains evidence to justify suspicions. The evidence against the murderer included Satanic symbols and rituals, as well as the manner of the murders themselves.⁴² Tragically, the murderer and the victims were children of Muslim families with varying levels of religiosity. It is clear that the killer has acquired deviant beliefs through digital technologies. The Discord application, which has been linked to other violent incidents among young people, was banned in Türkiye after some of the images that appeared in the national press. These incidents undoubtedly reinforce the discourse among religious families that “a youth is lost in the dark depths of digital media”. Similar incidents are said to occur frequently abroad. It is clear that some religious people who are sensitive about their own religion will feel the need to take precautions against this trend. Take the Amish in Pennsylvania, for example. They emerged as a group focused on identity sensitivity and live

⁴⁰ Nihat Oyman, “Dijital Gelişmeler Kapsamında Sosyo-Ekonomik Yaşam ve Din: Kripto Para Örneği,” *ATEBE* 7 (June 30, 2022), 75.

⁴¹ Sarı, “Manevi Arayışta Teknolojik Yönelim.”

⁴² Selin Hacıaliağlu, “Turkish Criminal Law Faces Scrutiny as a Man Brutally Kills Two Women - Türkiye Today,” *News, Türkiye Today* (July 10, 2024).

without technology. Another example is the struggle of an ultra-Orthodox Jewish community leader in Israel with mobile phones.⁴³ In the Muslim world, there are also religious people and religious groups who abstain from technological recording.

We are witnessing the struggle of the alienated subject with an environment that does not exist in reality.⁴⁴ If refined technologies without side effects cannot be produced, it can be thought that this process will lead us to a technological singularity that will cause the highest level of poisoning. Many people now agree that alternatives should be developed as soon as possible. The debate is moving beyond the question of technology's role in life and exploring alternatives. It is also possible to consider whether technology is no longer the only solution to sustain our lives and whether a freer religious life is possible with “technological detox”. The coming years will see a rise in discussions about religious conservatism and its role in combating the negative effects of the virtual environment.

2.3. A Perspective on Techno-Power from the Tradition of Muslim Thought: Willpower Approach

According to Islamic belief, the human body, which has been “created in the best form”, is regarded as a divine trust from Allah. It is viewed as a means of trial, as death (ajal) is an inevitable reality. Until that moment arrives, the body is expected to be nurtured with spiritual and moral virtues, as it serves as a vessel for the soul. In the afterlife, bodily resurrection will occur, and the soul will once again be embodied. The promised reward of paradise and the punishment of hell, resulting from rebellion against Allah, will be experienced physically. Based on this doctrinal understanding, it can be concluded that Islam envisions an inseparable unity between the soul and the body. Consequently, a purely transhumanist approach is unlikely to find a place within Islamic thought.

On the other hand, transhumanism can also be analyzed as a digi-modern phenomenon that contributes to the re-enchantment of the emerging digital world.⁴⁵ Ontologically, the concepts of virtuality and digital existence resemble an enigma. While physical activity is absent in the metaverse, mental faculties remain active, allowing for the transcendence of imagination at the level of consciousness. A connection can be drawn between the “alam al-mithal” (the Imaginal Realm), acknowledged by thinkers such as Suhrawardi, Ibn al-‘Arabi, and Mulla Sadra, and the metaverse.⁴⁶ This realm is considered a bridge between the world of intellect and the material world. Following this line of thought, virtual reality, albeit in a different dimension, could be considered a form of reality. Similarly, Al-Ghazali's concept of “perceptual existence” bears resemblance to this notion. Perceptual existence, as described by Al-Ghazali, appears as a representation in the consciousness of the perceiver but lacks independent existence in the external world. For example, the circular motion of a stick with fire at its tip creates the illusion

⁴³ Hananel Rosenberg - Tsurriel Rashi, “Pashkevlim in Campaigns against New Media,” *Digital Judaism: Jewish Negotiations with Digital Media and Culture*, ed. Heidi A. Campbell (New York: Routledge, 2015), 161.

⁴⁴ Işıklı - Küçükvardar, *Bilişim Devrimi, Teknolojinin Felsefi ve Sosyolojik Analizi*, 23,251.

⁴⁵ Ekber Şah Ahmedi, “Dijitalizm Bağlamında Transhümanizm ve Din: Sosyolojik Bir İnceleme,” *Kocatepe İslami İlimler Dergisi* 7/2 (2024), 402.

⁴⁶ Elif Yıldız, “İslam Felsefesi Perspektifinden Metaverse ve Misâl Âlemi Karşılaştırması,” *Tetik* 3 (2023), 126.

of an unbroken line; however, this is merely an optical illusion. Thus, a similarity can be established between perceptual existence and augmented reality utilized in the metaverse.⁴⁷

The intervention of new technologies on perception raises the following fundamental questions: Will humanity become enslaved by the very technologies it has created? Or will it exercise agency and volition to usher in a new phase of human existence? More succinctly, will it advance an ethical civilization, or will it destroy it?

Heidegger's perspective, which asserts that man is not the owner of being but rather the "shepherd of being"⁴⁸, appearing on the stage of existence within his predetermined fate, finds an equivalent in Islamic thought, where human beings are considered khalifah (stewards) on Earth. However, the will to power backed by technology is altering this religiously grounded perception of humanity. In this framework, control and governance are no longer vested in humans but rather in technology itself. Consequently, attempts to manage technology may paradoxically serve only to strengthen it.⁴⁹ This gives rise to a contradiction between modern technology and human autonomy. Humans are no longer living in an authentic reality or their own natural world; instead, they are compelled to exist in an artificial, fabricated universe, often unknowingly. Heidegger, who strikingly distinguishes between technique and the essence of technique, states: "The human being, emerging from the essence of technology, can no longer hear the voice of being."⁵⁰

Digital-based new technologies contain elements that will preoccupy humans and disrupt their fundamental duty of servitude to Allah. Some scholars argue that when technology becomes autonomous, human autonomy ceases to exist.⁵¹ If artificial intelligence algorithms become the sole source from which people derive religious knowledge, the authority of traditional religious institutions may be significantly impacted. Should technological singularity evolve to the point where it assumes the role of a deity, this would undoubtedly be identified as kufr (disbelief) within Islamic thought. Thus, an alternative perspective that upholds human autonomy against machine domination can be considered a necessary new approach. This is because it is ultimately up to the strength and patience of Allah's servant to perform physical acts of worship, such as ablution, prayer and fasting, and mental acts, such as being honest and just.

Free will, which Islam regards as the hallmark of human accountability before Allah, must be examined in this context. According to Nurettin Topçu, religion is "an event of will, transcending both intellect and emotion. It is an action that binds human will to divine will. Although intellect and emotions contribute to this process, the primary axis is will itself."⁵²

⁴⁷ Mustafa Yıldız, "Metaverse ve Metafizik," *Türkiye İlahiyat Araştırmaları Dergisi* 7/4 (December 31, 2023), 658.

⁴⁸ Martin Heidegger, *Teknik ve Dönüş & Özdeşlik ve Ayrım*, trans. Necati Aça (Ankara: Pharmakon Yayınevi, 2015), 58.

⁴⁹ Aysun Gür, "Heidegger'de Varolanlar ile Dünyanın İlişkisi Üzerine," *Kaygı. Bursa Uludağ Üniversitesi Fen-Edebiyat Fakültesi Felsefe Dergisi* 28 (April 30, 2017), 136.

⁵⁰ Didem Delice, "Heidegger'in Tekniğin Kökenine İlişkin Soruşturması," *FLSF Felsefe ve Sosyal Bilimler Dergisi* 23 (May 1, 2017), 324.

⁵¹ Tuba Nur Dönmez, "Teknoloji ve Dinî Değerler İlişkisi: Değer Merkezli Bir Değerlendirme" (I. Türkiye Lisansüstü Çalışmaları Kongresi, İstanbul: İlmi Etüdlar Derneği, 2013), 86.

⁵² Nurettin Topçu, *İradenin Davası/Devlet ve Demokrasi* (İstanbul: Dergah Yayınları, 2018), 69.

Topçu's "case for will" challenges the materialist-positivist foundations of technological thought, urging humanity to discover an alternative dimension of volitional reality. Furthermore, he calls for rebellion against forces that seek to alienate humans from their true essence. Willpower is an inherently human trait, originating in the body but extending to higher levels of existence, such as nationhood and religion. These two entities, which cannot be viewed independently of each other, can only engage in a struggle for survival against technology through the exercise of will. Within this framework, Topçu refers to "ethics of rebellion" and states: "The deepest goal of human will is to immerse itself in a moral world and establish an ethical order."⁵³ He does not refer to any arbitrary act of will but rather to a moral will that pertains to the core essence of humanity. Today, in the face of power-driven technology that allegedly has the potential to alter the very essence of humanity, there is a pressing need for an ethics of rebellion. It is also a call to preach, which is also seen as a form of worship. In this regard, Mehmet Akif's statement, "We have to make the realisation of the century the singing of Islam." can only be realized through a willpower approach.

The consolidation of worldly power within a technological elite through techno-authoritarianism raises concerns about the potential emergence of a new form of servitude that undermines human dignity. The commodification of religious needs by profit-driven capitalist entities may lead to a new world order that prioritizes material gain over spiritual fulfillment. The Islamic ideal of social justice, which has been upheld for centuries, could be reduced to mere nostalgia or an unattainable utopian aspiration. If the increasing wealth disparity is exacerbated by technopoly, the consequences may disproportionately affect Muslim populations already struggling with economic hardship. The cybernetic environments where human interaction is minimal risk artificializing emotions and making individuals susceptible to manipulation. However, most Muslim societies have not yet developed a comprehensive ethical framework to address the moral implications of Western-driven capitalist technological advancements. Additionally, the number of scholars producing intellectual discourse on these matters within the Islamic world remains quite limited.

If transhumanist predictions partially materialize through technological advancements, ensuring that these developments align with human dignity and ethical values will be crucial from an Islamic philosophical perspective. Naturally, there is an emerging expectation that new technological lifestyles should be presented to Muslims in ways that do not conflict with Islamic values. Furthermore, new jurisprudential rulings regarding these developments must be established, particularly within Islamic fiqh.

While Islam promises a world without death and suffering in the afterlife, transhumanist technologies suggest that such an ideal can be realized within this world. As technological singularity relies solely on data-based analysis of existing cultures, it may disregard theistic religions, including Islam, and develop its own belief system. In this regard, transhumanist ideals conflict with Islamic idealism. The technology that claims to be able to do this, and create a simulation that can replace God, can only be overcome by the willpower of people of true faith controlling new technologies. In the 2020 pandemic, we can evaluate the scepticism and

⁵³ Topçu, *İrâdenin Davası/Devlet ve Demokrasi*, 156.

objections rising from religious circles against mRNA vaccines, the safety of which has not yet been proven. Whether emerging developments can be regulated and whether fundamental institutions such as family and education can be shielded from technological threats remain critical concerns today. If new technologies are to be utilized positively, it is essential to determine how they should be employed.

Unregulated, limitless, and unpredictable interactions in digital spaces raise the necessity for religious authority to oversee and interpret religious manifestations in the digital realm.⁵⁴ In response to both acceptance-based and rejectionist approaches, a third path—one rooted in faith-driven volitional ethics—can serve as an alternative solution for harmonizing technological progress with Islamic values.

Conclusion

The rapid advances in digital technologies, shaped by recent developments in science, have created new problem areas, especially for philosophical and social paradigms. New technological tools not only expand human capabilities but also create new uncertainties. The transition to the metaverse, augmented reality, and the emergence of general artificial intelligence, driven largely by capitalism, a product of modernity, are evidence of a profound transformation in human experience. Just as modern rationality gave rise to capitalism, capitalist utilitarianism now results in a form of technologism that threatens to redefine the very meaning of being human. Moreover, individuals born in the digital age find themselves in a world marked by deep socio-economic inequalities and an increasing dependence on cybernetic systems devoid of ethical consciousness.

Responses to these technological changes vary significantly across segments of society. Some argue that AI and digital transformation are inevitable and that societies must adapt or risk being left behind. Others are skeptical of these developments and fear their impact on social and religious structures. Rather than rejecting technology altogether, religious movements are increasingly seeking to use digital platforms to maintain their influence and reach wider audiences. For example, the metaverse offers new spaces where religious discourse can evolve and maintain its relevance. Conversely, concerns persist that AI-driven transformations, particularly within the framework of transhumanist and posthumanist ideologies, could undermine religious beliefs and alter traditional understandings of faith.

From a religious perspective, a complete rejection of technological advances is neither practical nor sensible. But this does not mean that humanity should surrender to a structured digital world. Instead, a critical and controlled approach is required; one that supports human agency and ensures that technology remains a tool rather than a force dictating human existence. In Islamic thought, the emphasis on collective will and ethical considerations offers a potential framework for managing technological advances without compromising religious principles and in this study, inspired by Topçu, it is called the “willpower approach”.

⁵⁴ Muhammed Yamaç, “Metaverse’te Dinî Ve Toplumsal Tezahürler,” *Dinbilimleri Akademik Araştırma Dergisi* 23/1 (March 31, 2023), 51–53.

Given the sweeping societal transformations brought about by new technologies, neither blind acceptance nor outright rejection is a sustainable response. Social science, particularly research on digital sociality, offers important insights into the evolving nature of human interaction in a technology-driven world. Policymakers and legal experts must engage with ethical guidelines and regulatory frameworks to mitigate the risks associated with digital technologies. While preserving religious and cultural authenticity is a respectable choice in a rapidly changing world, it is also necessary to envision a balanced approach where technology serves humanity rather than subjugates it.

In this context, it becomes imperative to set ethical limits against the dominance of digital technologies – especially against the interests of global information corporations. Religious traditions that have emphasized moral values and social harmony for centuries can provide a basis for such an approach. The principles of divine justice and moral responsibility embedded in religious heritage can serve as a starting point for a philosophy of technology that prioritizes human dignity and ethical integrity. Indeed, in Muslim societies facing the moral dilemmas of digital consumption driven by the logic of the capitalist market, the necessity of a Quranic philosophy of technology is becoming increasingly evident. In this vein, faith and willpower can serve as guiding principles in resisting the hegemony of techno-power. These moral faculties can even ensure that digital transformation is compatible with ethical values rather than undermining them. The Muslim intellectual tradition, based on a value-centered worldview, can evolve in response to digitalization while maintaining its ethical stance. Renewal is not just an option, but a necessity in meeting the challenges posed by technological advances. For example, value-based digital practices can be developed to align with societal and ethical demands, and educational institutions can integrate AI responsibly while preserving foundational religious and moral teachings.

In conclusion, if technology cannot be completely controlled, it must at least be managed to prevent its negative consequences. Protecting the religious consciousness of future generations in the digital age requires proactive measures that strike a balance between innovation and ethical responsibility. Only with such a thoughtful and critical approach can humanity navigate the intersection of technology, religion and social identity in the 21st century.

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The Potential of Artificial Intelligence as the Learning Ecosystem of the Future in Adult Religious Education

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Abstract

In today's information society, the rapid pace of technological advancements and the increasing complexity of information processing necessitate that individuals acquire a broader and more diverse set of skills. In this dynamic environment, adopting innovative approaches in education has become essential for individuals to develop their competencies and keep pace with the demands of the era. This study aims to examine the potential of artificial intelligence (AI) technologies in adult religious education and to evaluate how these technologies can contribute to learning processes. The research investigates whether AI systems function as mechanisms that completely replace the roles of religious educators or as tools that enhance existing educational processes. The study employs a qualitative methodology to understand the impact of AI in adult religious education. Initially, a detailed review of literature in cognitive sciences, AI technologies, computer sciences, and adult religious education was conducted. This review provided a comprehensive understanding of the development and applications of AI technologies in education while also identifying existing research gaps. The literature review also covered the historical role of AI in education and the innovations it offers today. Furthermore, the study analyzed the effectiveness of innovative applications such as intelligent tutoring systems, personalized learning platforms, gamification tools, and virtual reality technologies. The degree to which these systems address the individual needs of adult learners was evaluated through detailed analysis. The research also placed special emphasis on ethical considerations, addressing issues such as data privacy, human-machine interaction, and the limitations of AI in transmitting values. Proposed solutions to mitigate these challenges were presented. These ethical discussions also encompassed the question of how technology can align with a human-centered approach, forming an integral part of the study. All data were evaluated using thematic analysis, providing a comprehensive understanding of the role of AI in religious education. The findings indicate that AI technologies hold significant potential in adult religious education. However, these technologies cannot fully replicate the indispensable roles of human educators, such as fostering empathy, providing ethical guidance, and offering spiritual support. The most effective use of AI in education lies in its role as a complementary tool that enhances existing processes. Technological innovations, particularly gamification and virtual reality applications, demonstrate significant potential to make learning experiences more engaging. However, challenges were observed regarding adult learners' adaptation to these innovations. Personalized learning platforms offer structured support in areas such as text interpretation, exploring ethical issues, and learning ritual practices, effectively addressing individual learning needs. Nonetheless, the importance of human-centered pedagogical approaches in developing emotional intelligence, social belonging, and critical thinking has been reaffirmed. Therefore, AI technologies demonstrate potential in supporting personalized learning and enhancing student engagement in religious education. However, their integration must prioritize the preservation of pedagogical values and the reinforcement of educators' guiding roles. This ensures that technological advancements can be utilized while maintaining the human-centered nature of education.

Keywords

Religious Education, Adult Religious Education, Artificial Intelligence in Education, Personalized Learning Platforms, Digital Transformation in Education, Ethical Dimensions of AI

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Yetişkin Din Eğitiminde Geleceğin Öğrenme Ekosistemi Olarak Yapay Zekanın Potansiyeli

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Öz

Günümüz bilgi toplumunda teknolojik gelişmelerin hız kazanması ve bilgi işlem süreçlerinin karmaşıklaşması, bireylerin daha geniş ve çeşitli becerilere sahip olmasını gerektirmektedir. Bu dinamik ortamda, bireylerin kendilerini geliştirebilmeleri ve çağın gerekliliklerine ayak uydurabilmeleri için eğitim alanında yenilikçi yaklaşımların benimsenmesi önem kazanmıştır. Bu araştırma, yapay zekâ teknolojilerinin yetişkin din eğitimine sunduğu olanakları, sağladığı katkıları ve taşıdığı sınırlılığı ortaya koymayı amaçlamaktadır. Bunun yanı sıra yapay zekâ sistemlerinin din öğretmenlerinin rollerini bütünüyle dönüştüren bir mekanizma mı yoksa mevcut eğitim süreçlerini zenginleştiren ve geliştiren bir araç mı olduğu sorusu da ele alınmıştır. Çalışmada nitel bir yöntem kullanılmıştır. Araştırma kapsamında öncelikle bilişsel bilimler, yapay zekâ teknolojileri, bilgisayar bilimleri ve yetişkin din eğitimi alanlarındaki literatür detaylı bir şekilde incelenmiştir. Bu tarama, yapay zekâ teknolojilerinin gelişim süreci ve eğitimdeki uygulamalarıyla ilgili genel bir anlayış sunarken, aynı zamanda var olan araştırma boşluklarını belirlemeye olanak tanımıştır. Literatür incelemesi, yapay zekânın eğitim alanında tarihsel olarak nasıl bir rol oynadığını ve günümüzde hangi yenilikleri sunduğunu da kapsamaktadır. Ayrıca çalışma kapsamında akıllı öğretim sistemleri, kişiselleştirilmiş öğrenme platformları, oyunlaştırma araçları ve sanal gerçeklik teknolojileri gibi yenilikçi uygulamaların etkinliği incelenmiştir. Araştırmada ayrıca etik boyutlara özel bir vurgu yapılmış; veri gizliliği, insan-makine etkileşimi ve yapay zekânın değer aktarımındaki yetersizlikleri gibi konular ele alınmış ve bu sorunları gidermeye yönelik çözüm önerileri sunulmuştur. Etik boyutlara dair bu tartışmalar, teknolojinin insan merkezli bir yaklaşımla nasıl uyum sağlayabileceği sorusunu da kapsamış ve çalışmanın önemli bir bileşenini oluşturmuştur. Tüm bu veriler tematik analiz yöntemiyle değerlendirilerek yapay zekânın din eğitimindeki rolü hakkında kapsamlı bir anlayış elde edilmiştir. Araştırmadan elde edilen bulgular, yapay zekâ teknolojilerinin yetişkin din eğitiminde çok yönlü bir potansiyele sahip olduğunu göstermektedir. Ancak bu teknolojiler, insan öğreticilerin empati kurma, etik rehberlik sağlama ve manevi destek sunma gibi vazgeçilmez rollerini tam anlamıyla yerine getirememektedir. Yapay zekânın eğitimde etkili kullanım alanı, mevcut süreçleri tamamlayıcı bir araç olarak hizmet vermesidir. Teknolojik yenilikler, özellikle oyunlaştırma ve sanal gerçeklik uygulamaları sayesinde öğrenme deneyimlerini daha ilgi çekici hale getirme potansiyeli sunmaktadır. Bununla birlikte, yetişkin öğrencilerin bu yeniliklere adaptasyonu konusunda bazı zorluklar ortaya çıkmıştır. Kişiselleştirilmiş öğrenme platformları, metin yorumlama, etik meselelerin incelenmesi ve ritüel uygulamalarının öğrenilmesi gibi alanlarda yapılandırılmış bir destek sunarak bireysel öğrenme ihtiyaçlarına etkin bir şekilde yanıt vermektedir. Ancak duygusal zekâ, sosyal aidiyet ve eleştirel düşünce gibi unsurların geliştirilmesinde insan merkezli pedagojik yaklaşımların önemi bir kez daha vurgulanmıştır. Dolayısıyla yapay zekâ teknolojilerinin din eğitiminde bireyselleştirilmiş öğrenmeyi destekleme ve öğrenci katılımını artırma potansiyeli taşıdığı görülmektedir. Fakat bu teknolojilerin entegrasyonunda pedagojik değerlerin korunması ve eğitimcilerin rehberlik rollerinin desteklenmesi esas alınmalıdır. Böylelikle hem teknolojik yeniliklerden yararlanılabilir hem de eğitimin insan merkezli yapısı sürekli kılınabilir.

Anahtar Kelimeler

Din Eğitimi, Yetişkin Din Eğitimi, Eğitimde Yapay Zekâ, Kişiselleştirilmiş Öğrenme Platformları, Eğitimde Dijital Dönüşüm, Yapay Zekânın Etik Boyutları

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Introduction

The skills required for individuals to thrive in the modern information society are becoming increasingly complex. Living in a world driven by technology and information necessitates acquiring a broader and more intricate set of competencies. Digital learning support systems—such as online education programs, virtual tutors, and educational applications—facilitate learning through digital tools and platforms specifically designed to enhance the learning process. However, alongside these aids, it remains undeniable that learning is still a cognitively demanding activity requiring individuals to exert significant mental effort. Moreover, it is anticipated that individuals will continuously need to acquire new knowledge in the future. This is because knowledge and technology are evolving at a rapid pace, compelling individuals to engage in lifelong learning to adapt to these changes effectively.

Artificial intelligence (AI) technologies have become increasingly accessible, gaining commercial value and playing an ever more significant role in everyday applications. This development indicates that AI-powered technologies are no longer restricted to a specific group but are now widely accessible, acquiring substantial commercial value. AI has found applications in various fields, including healthcare, education, and finance, and is becoming an integral part of daily life. This highlights the central role AI plays in individuals' access to information and learning processes, with a growing number of people benefiting from these technologies.

Building on these developments, the impact of digital technologies on education is regarded as a fundamental transformation in which humans are no longer the sole authority in thinking and decision-making.¹ The finding indicates a partial reduction in the centrality of human cognitive and decision-making roles within the learning process. Advanced digital support systems have transformed computers from mere tools for providing information into active partners in the learning process. These systems now collaborate with humans to process data, conduct analyses, and support learning, assuming a significant and collaborative role in educational endeavours.

The increasing complexity of the information society and the rapid transformation of social structures have heightened adults' need for continuous learning in both their professional and personal lives. Consequently, religious values must be periodically revisited within the context of current debates and integrated into lifelong learning frameworks. Artificial intelligence-enhanced learning tools and digital advisors expedite and enrich the educational process by providing rapid, in-depth access to personalized content. Beyond individual satisfaction, these technologies foster social cohesion, empathy, and a sense of communal responsibility. Finally, adult learners' evolving needs are identified through a multilayered approach—drawing on online platform analytics, survey data, social media discourse, official and academic reports, and AI-driven analysis—thereby enabling the ongoing refinement of curricular content and pedagogical delivery to align with participants' expectations. This demand is further driven by

¹ John Erpenbeck - Werner Sauter, *So werden wir lernen! Kompetenzentwicklung in einer Welt fühlender Computer, kluger Wolken und sinnsuchender Netze* [This Is How We Will Learn!: Skill Development in a World of Sentient Computers, Smart Clouds, and Meaning-Seeking Networks]. (Berlin, 2013), VI.

technological innovations, such as AI-supported learning tools and digital advisors, which are transforming traditional educational processes. Digital systems now enable faster and more efficient access to knowledge, automating some responsibilities traditionally held by educators. These technologies aim to enhance learning effectiveness through data collection and analysis. However, this integration raises critical concerns regarding individual privacy and ethical data handling. While digitalization offers significant benefits, ensuring data security and addressing privacy risks are crucial. Appropriate measures must be implemented to mitigate these challenges, enabling the effective and ethical use of digital technologies in education.

AI's role in education is often categorized into two functions: substitution and augmentation. Substitution refers to the replacement of traditional teaching methods with AI-driven systems, while augmentation focuses on enhancing existing educational practices to improve the overall learning experience. Rather than fully replacing teachers, adopting AI applications that support specific tasks proves more effective. By augmenting educators' roles, AI facilitates more efficient processes and enriches education. This approach emphasizes AI as a complementary tool that improves teaching quality while preserving the indispensable role of human educators.²

This study seeks to evaluate the potential of artificial intelligence in adult religious education by examining the balance between “substitution” and “augmentation” of instructor roles. In particular, the question of whether AI will fully assume the responsibilities of religious educators or primarily function as a supportive tool constitutes a secondary but equally critical focus of the research. In order to answer this question, the study evaluates current findings from cognitive science, AI research, computer science, and adult religious education through an interdisciplinary approach. Thus, drawing on data from various fields, a comprehensive analysis is provided regarding the roles that AI can undertake in adult religious education, offering a detailed assessment of how, in the medium term, AI may serve as a supportive tool in fulfilling some responsibilities of religious educators.

This study employs the literature review approach—a qualitative research method—to examine the potential of artificial intelligence as the learning ecosystem of the future in adult religious education, balancing its role between “substitution” and “augmentation” (support and extension) of instructor functions. During the research process, a literature review will be conducted to thoroughly analyse the existing body of knowledge in the field and establish a theoretical framework. The literature review will contribute to both the development of theoretical foundations and understanding of the current state of AI-based applications. Additionally, various examples of AI-based applications will be examined to evaluate their impact on educational processes and the opportunities they offer for adult religious education. The data obtained will be integrated using a holistic approach, with the aim of producing more substantial and comprehensive findings. This methodology facilitates a multidimensional exploration of the relationship between AI and adult religious education, ensuring that the topic is examined from a broad and nuanced perspective.

² Kirste, Moritz, “Augmented Intelligence – Wie Menschen mit KI zusammen arbeiten”, *lit-Themenband Künstliche Intelligenz Technologie / Anwendung / Gesellschaft* (Hrsg. Volker Wittpahl: Berlin: Springer Vieweg, 2019), 58-68.

A significant portion of the studies on this topic originates from Western sources, providing a substantial body of literature both theoretically and practically. In Turkey, research in this area remains in its early stages, with a relatively limited literature. Existing studies in the Turkish context provide only limited data on the application of AI technologies in religious education and their potential to address the specific needs of adult learners. The situation underscores the necessity for a more comprehensive examination of the impacts of AI-based technologies on adult religious education. A more comprehensive exploration of the relationship between AI and religious education in Turkey is essential within this context. Such research would contribute to the expansion of knowledge in the field and help elevate it to a level comparable to that of Western literature. This need necessitates intensified efforts in both theoretical and practical research. This study seeks to address the existing knowledge gap in this area and to examine AI's potential in adult religious education within the Turkish context.

1. Definitions, Historical Development, and Ethical Dimensions

Definitions of AI are broadly categorised into two main approaches. The first approach defines AI as a system centered on rational thinking. In these definitions, AI is considered as a logical, rational, and objective decision-making system. For instance, algorithms designed to determine the optimal solution to a problem or to perform logical decision-making processes are included in this category. The second category defines AI based on its ability to imitate or model human thought and behaviour. This approach acknowledges that human behaviour encompasses both rational and emotional components. Therefore, it emphasises that AI should account for rational and irrational aspects. In other words, definitions of AI sometimes rely on logic and rationality, while at other times, they consider the complex and emotional dimensions of human behaviour as the standard.³

While technological advancements have led to significant progress in AI, establishing a universal and fixed definition of “intelligent” performance remains a challenge. Furthermore, the increasing computational power of computer systems is insufficient to exhibit intelligent behaviours. The primary reason for this limitation lies in the fundamental differences between how the human brain operates and how computers function. Unlike computers, which process information sequentially, the human brain possesses the capacity for “parallel processing,” enabling it to perform numerous tasks simultaneously. This unique characteristic makes it difficult for computer systems to replicate or comprehend human intelligence fully.⁴

AI can be evaluated based on human cognitive potential. Drawing from the definition provided by Elaine Rich and Kevin Knight, AI is described as a discipline that explores how

³ Julian Stubbe, Jan Wessels, Guido Zinke, “Neue Intelligenz, neue Ethik? [New Intelligence, New Ethics?]”, (Herausgeber Prof. Dr. Volker Wittpahl), *iit-Themenband Künstliche Intelligenz Technologie | Anwendung | Gesellschaft*, (Springer Vieweg), (2019), 239-250; Moritz Kirste - Markus Schürholz, “Einleitung: Entwicklungswege zur KI.’ Künstliche Intelligenz: Technologie | Anwendung | Gesellschaft [Introduction: Development Paths to AI Artificial Intelligence: Technology | Application | Society]”, (Herausgeber Prof. Dr. Volker Wittpahl), *iit-Themenband Künstliche Intelligenz Technologie | Anwendung | Gesellschaft*, Berlin: Springer Vieweg, (2019), 21.

⁴ Kirste - Schürholz, “Einleitung: Entwicklungswege zur KI.’ Künstliche Intelligenz: Technologie | Anwendung | Gesellschaft”, 29-33.

computers can perform tasks that are currently better executed by humans.⁵ This definition does not confine intelligence to a universal capacity for thinking. Instead, it considers AI in the context of computers progressively advancing in problem-solving and decision-making processes traditionally unique to humans. A concrete example of this transformation can be seen in tasks such as machine translation, where computers have begun to produce successful results in areas previously handled exclusively by humans.⁶

AI is deeply connected to digital transformation, Industry 5.0, and Big Data,⁷ yet its roots extend to a rich academic history. A key milestone is Alan Turing's 1936 concept of the Universal Machine, which laid the theoretical foundation for AI research and its principles.⁸ Technological advancements, particularly in hardware, have driven AI's evolution. Moore's Law, describing the doubling of processing power in integrated circuits over time, significantly accelerated AI's development during the digital revolution.⁹ In the 1960s, despite limited computational power, early AI systems made notable progress. Programs such as STUDENT, ELIZA, and SHRDLU achieved success in natural language processing, marking milestones in AI's emergence as a disciplinary field.¹⁰

Intelligent software has made remarkable progress, often surpassing human capabilities in key areas. A significant milestone was IBM's Deep Blue defeating chess champion Garry Kasparov in 1997, showcasing AI's potential in strategic thinking and problem-solving.¹¹ In 2011, IBM's Watson gained recognition by winning Jeopardy!, leveraging advanced natural language processing and large-scale data analysis. In 2014, the humanoid robot Pepper, created by Amit Kumar Pandey and Rodolphe Gelin, demonstrated AI's role in social interaction with its emotional intelligence and natural communication capabilities.¹² Today, digital voice assistants

⁵ Elaine Rich - Kevin Knight, *Artificial intelligence*, (New York: McGraw-Hill, 1991), 3.

⁶ Silvia Lipp, Gernot Dreisiebner, Michaela Stock, "Das Potenzial von Learning Analytics in der Berufsbildung [The Potential of Learning Analytics in Vocational Education and Training]", *50 Jahre Berufsbildungsforschung im Spannungsfeld von Wissenschaft, Politik und Praxis*. (Hrsg. Löffler, Roland; Schlögl, Peter; Schmölz, Alexander), (wbv Media GmbH & Co. KG, Bielefeld), (2021), 173; Wolfgang Hesse, "Das Zerstörungspotenzial von Big Data und Künstlicher Intelligenz für die Demokratie [The Destructive Potential of Big Data and Artificial Intelligence for Democracy]", *Informatik Spektrum* 43.5, (2020), 343-345.

⁷ Hesse, "Das Zerstörungspotenzial von Big Data und Künstlicher Intelligenz für die Demokratie", 339-346.

⁸ Alan Mathison Turing, "On computable numbers, with an application to the Entscheidungsproblem", *J. of Math* 58.345-363: 5. (1936), 232.

⁹ Hesse, "Das Zerstörungspotenzial von Big Data und Künstlicher Intelligenz für die Demokratie", 339.

¹⁰ Ernst Buchberger, *Sprachverstehen in der Artificial Intelligence* [Language Understanding in Artificial Intelligence], (Stuttgart: Teubner), (1984), 138-145.

¹¹ Philip Bresinsky, Hans-Christian Gräfe - Michael Schiessl, "Wie die Maschine uns narrt [How the Machine Deceives Us]", *Transfer* 4, (2019), 113.

¹² Gunther Friedl, "Künstliche Intelligenz im Controlling [Artificial Intelligence in Controlling]", *Controlling* 31.5, (2019), 35; Kathrin Reger-Wagner - Sven Kruschel, "Humanoide Roboter: Vom Maschinenwesen über Dialogpartner zum Markenbotschafter [Humanoid Robots: From Mechanical Beings to Dialogue Partners and Brand Ambassadors]", *Jenaer Beiträge zur Wirtschaftsforschung*, (2020/1), 5-12.

like Apple's Siri¹³ and Google Assistant are integral to daily life, performing tasks, responding to commands, and acting as personal assistants, reflecting AI's widespread adoption.¹⁴

Despite remarkable advancements, AI systems still fall short of fully exhibiting “intelligent” behaviours and face notable limitations. Marvin Minsky's critiques highlighted these shortcomings, emphasizing that early AI systems relied on simple algorithms focused on problem-solving without significant cognitive depth. He argued that such systems merely reverted to previous decisions and tested alternative solutions when encountering errors, lacking the fundamental human ability to analyze root causes and derive sophisticated solutions. Minsky noted that while these systems might be technically effective, they remain cognitively superficial. This critique remains relevant today, as modern AI systems still struggle to replicate human-like thinking, adaptability, and intuitive problem-solving, highlighting the significant challenges AI faces in achieving true human intelligence.¹⁵

AI research has evolved into a broad interdisciplinary field by focusing on numerous sub-problems. One of the primary goals of this research is to represent knowledge effectively and generate solutions through appropriate search algorithms. Within this framework, AI has developed various sub-disciplines tailored to different application areas. One prominent subfield is *Pattern Recognition*, which focuses on identifying and classifying visual data such as handwriting, faces, or objects.¹⁶ *Natural Language Processing* (NLP) focuses on enabling computers to understand, process, and generate human language. This field encompasses a wide range of applications, including machine translation, sentiment analysis, and text classification.¹⁷ *Question-answering systems* have garnered significant attention, particularly with developing systems like IBM Watson. These systems focus on simulating human-like processes for accessing and understanding information.¹⁸ *Computational Creativity* involves research focused on modelling and simulating human creativity. Notably, studies in this field aim to enhance machines' creative capacity by modelling intrinsic motivational factors such as curiosity.¹⁹ These subfields of AI illustrate the technology's potential to provide solutions to complex problems across various disciplines.

AI research extends beyond technical advancements, delving into philosophical and ethical dimensions. A key focus is the moral responsibilities of intelligent systems capable of autonomous decision-making and their societal impacts. Studies explore how AI can simulate

¹³ Friedl, “Künstliche Intelligenz im Controlling”, 35.

¹⁴ Jürgen Anke, Uwe Fischer - René Lemke, “Integration digitaler Sprachassistenten in den Kundenservice am Beispiel der Stadtwerke Leipzig [Integration of Digital Voice Assistants in Customer Service: The Example of Stadtwerke Leipzig]”, *Digitalisierung von Staat und Verwaltung*. Bonn: Gesellschaft für Informatik e.V.. PISSN: 1617-5468. Münster, (2019), 25-36.

¹⁵ Marvin Minsky, “Why People Think Computers Can't.”, *AI Magazine* 3.4, (1982), 13-14.

¹⁶ Peter Altmeyer, “Mustererkennung (Pattern-Recognition)”, *Dermatologische Differenzialdiagnose: Der Weg zur klinischen Diagnose*, (2007), 475-517.

¹⁷ Franziska Meyer, “Sprachmodelle im Natural Language Processing [Language Models in Natural Language Processing]”, *Seminararbeit*, (2020), 3-21.

¹⁸ Falk Pollok, Ulrik Schroeder - Mohamed Amine Chatti, “PalmQA: Ein Frage-Antwort-Ensemble für selbstgesteuertes Lernen [PalmQA: A Question-Answer Ensemble for Self-Directed Learning]”, *Gesellschaft für Informatik*, (2017), 51-62.

¹⁹ Dieter Mersch, “Kreativität und Künstliche Intelligenz: Einige Bemerkungen zu einer Kritik algorithmischer Rationalität [Creativity and Artificial Intelligence: Some Remarks on a Critique of Algorithmic Rationality]”, *Zeitschrift für Medienwissenschaft* 11.21-2, (2019), 65-74.

human-like ethical reasoning, ensuring systems make decisions aligned with human values while adhering to principles of transparency, fairness, and accountability. Ethical concerns include the risks of AI exacerbating bias, inequality, or discrimination. Research in this area seeks to develop AI as a responsibly applied entity, integrating ethical considerations to address societal challenges and move beyond being a mere technological tool.²⁰

2. Conceptual Foundations: Turing, Searle, and the Strong-Weak AI Distinction

Artificial intelligence is a transformative technology distinguished by its ability to drive change on both individual and societal levels. However, a comprehensive understanding of this potential requires an examination of AI's historical development and theoretical foundations. In this context, the works of pioneering thinkers such as Alan Turing and John Searle play a crucial role in understanding the fundamental concepts and limitations of AI.

Alan Turing, a pivotal figure in establishing the theoretical foundations of modern computer science, gained recognition for developing the Turing Machine in the 1930s. By posing the question, "Can machines think?" Turing addressed one of the foundational questions of AI. In line with this inquiry, he introduced the *Turing Test*, which employs human behaviour as a primary reference point for defining AI. The *Turing Test* evaluates whether a machine possesses human-like thinking capabilities. In this test, an evaluator engages in written communication with both a human and a machine and attempts to distinguish which participant is human. If the evaluator perceives the machine as human, the machine is considered to have passed the test.²¹ Turing's work provided a significant framework for understanding the potential of AI to develop human-like intelligence and behaviour. This framework has shaped the theoretical foundations of contemporary AI research. Turing's ideas have been influential not only in theoretical discussions but also in practical domains. In educational technologies, for instance, developing personalised learning experiences and optimising individual learning processes represent practical manifestations of Turing's theories.²²

John Searle developed a critical perspective on the capacity of AI to achieve human-like thought and raised significant objections to the *Turing Test*. Searle argued that a machine's ability to perform symbolic operations does not demonstrate meaningful thinking or genuine "understanding." He illustrated this view through his famous *Chinese Room* experiment, introduced in 1980. The *Chinese Room* experiment is based on a scenario in which an individual who does not understand Chinese uses an instruction manual to match Chinese symbols. By correctly combining the symbols, the individual appears, from an external perspective, to understand Chinese. However, since the individual lacks comprehension of the symbols'

²⁰ Andreas Burkert, "Die Ethik und die Gefahren der künstlichen Intelligenz [The Ethics and Dangers of Artificial Intelligence]", *ATZ-Automobiltechnische Zeitschrift* 119.11, (2017), 8-13; Joachim Hertzberg, "Was ist KI und welche ethischen Fragen stellt ihre Anwendung? [What is AI, and What Ethical Questions Does Its Application Raise]", (Hrsg. Otten, Gabriele - Jutta Paessens), *Künstliche Intelligenz (KI) und Human Enhancement*, (2022), 9-13; Ahmet Efe, "Yapay Zekâ Risklerinin Etik Yönünden Değerlendirilmesi [An Ethical Evaluation of Artificial Intelligence Risks]", *Bilgi ve İletişim Teknolojileri Dergisi* 3/1 (Haziran 2021), 1-24.

²¹ Alan Mathison Turing, "Computing Machinery and Intelligence", *Mind* 59/October (1950), 433-436.

²² Friedl, "Künstliche Intelligenz im Controlling.", 35.

meanings, the process does not constitute meaningful cognitive activity. Through this experiment, Searle demonstrated that a machine's ability to perform successful symbolic operations does not prove it possesses the ability to think or understand like a human.²³ Searle's critiques raised fundamental questions about whether AI can possess human-like cognitive processes and whether symbolic manipulation aligns with the concept of "understanding." These debates remain significant today, as they probe how structurally different AI systems are from human intelligence and how these differences impact processes of thinking and understanding. The contributions of Turing and Searle provide contrasting perspectives in AI discussions, offering a critical framework for understanding the philosophical, ethical, and practical foundations of this discipline.²⁴

Another significant contribution of John Searle to the field of AI is his distinction between *strong AI* and *weak AI*.²⁵ This distinction provides a fundamental framework for understanding and evaluating the capabilities of AI systems, and it remains relevant today.

- *Strong AI*: This concept is based on the assumption that a machine can not only imitate human behaviour but also think, understand, and learn consciously. From this perspective, *strong AI* systems could potentially share the essential attributes of human intelligence, such as consciousness, intuition, and the ability to create meaning. The notion of *strong AI* goes beyond attributing merely functional activity to machines, suggesting that they could become genuine cognitive agents. However, Searle adopted a critical stance toward this view, arguing that current technologies lack the capacity for conscious thought and understanding.²⁶

- *Weak AI*: Represents the understanding that a machine is a tool programmed to solve specific problems or perform particular tasks. According to this view, AI systems merely simulate human thought processes. However, they lack the underlying capabilities of consciousness, understanding, or original thinking. *Weak AI* is effective, particularly in technical tasks such as data analysis, pattern recognition, and process automation. Yet, the operations performed by these systems are limited to symbolic manipulation.²⁷

Despite achieving remarkable success in specific tasks, contemporary AI systems have yet to attain the level of consciousness or general intelligence required to fully pass the *Turing Test*. This limitation necessitates the use of more narrowly focused methods for evaluating current systems. These methods are typically restricted to specific conversational topics and must meet the claims associated with *strong AI*.²⁸ In this context, *strong AI* remains a theoretical goal. *Strong AI* is defined as systems with a general intelligence capacity similar to humans, capable of operating flexibly and independently across various domains, not just in specific tasks. Such

²³ John. R. Searle, "Minds, Brains, and Programs", *Behavioral and Brain Sciences* 3 (3), (1980), 417-457.

²⁴ Jürgen J. Searles Kritik am Funktionalismus — Eine Untersuchung des Chinesischzimmers [J. Searle's Critique of Functionalism: An Examination of the Chinese Room]", *Zeitschrift für Allgemeine Wissenschaftstheorie* 22, (1991), 321-336.

²⁵ Searle, "Minds, Brains, and Programs", 417.

²⁶ Searle, "Minds, Brains, and Programs", 417-424; Igor Furgel, "Künstliche Intelligenz als System [Artificial Intelligence as a System]", 2022, 22-36. <http://furgel.com/index-Dateien/Page336.html>

²⁷ Searle, "Minds, Brains, and Programs", 435-455; Furgel, "Künstliche Intelligenz als System", 9-22.

²⁸ Kirste - Schürholz, "Einleitung: Entwicklungswege zur KI. Künstliche Intelligenz: Technologie| Anwendung| Gesellschaft", 21-35.

systems have the potential to embody qualities unique to human intelligence, such as conscious thought, problem-solving, and inference-making. However, the vast majority of AI technologies developed today fall within the scope of *weak AI*. *Weak AI* refers to systems that function effectively within a narrow domain, providing solutions to predefined problems but lacking the capacity for conscious thought or general intelligence.²⁹

Contemporary scientific and technological advancements offer a substantial foundation for achieving the goal of *strong AI*. Advanced algorithms, increased computational power, and expanding data repositories enable AI systems to perform more complex tasks. However, the primary challenges in achieving *strong AI* revolve around how concepts such as consciousness, understanding, and general intelligence can be technically implemented. Consequently, the notion of *strong AI* remains both a theoretical objective and a central focus of scientific debate.³⁰

3. Integration, Pedagogical Approaches, and Sub-Disciplinary Perspectives

Artificial Intelligence and Education has emerged as a critical research domain in today's era of rapid digital transformation, driven by the integration of technology into educational processes. This field examines how AI technologies can enhance education by transforming teaching methods and reshaping traditional approaches. Beyond the technical design of AI systems, this interdisciplinary domain addresses the pedagogical, ethical, and societal implications of AI in education. It analyzes the impact of AI-based tools on teachers and students, focusing on their role in personalizing and improving learning processes. Applications like adaptive learning systems, automated assessment tools, and digital teaching assistants showcase AI's transformative potential. These technologies not only reduce teachers' workloads, but also address students' individual needs and enhance the overall effectiveness of education.³¹

Furthermore, the field of AI and education extends beyond pedagogical objectives, offering a broad perspective that considers the ethical, social, and cultural dimensions of AI systems. Research in this domain examines the impacts of AI-based tools across various educational levels, ranging from early childhood education to higher education and adult learning. These studies contribute significantly to the field by providing theoretical and practical insights into how AI applications can be designed and implemented to meet individual learning needs and optimise learning processes.³²

One of the most prominent applications in the field of AI and education is software systems known as intelligent tutoring systems (ITS). These systems are designed to support individuals' learning processes and, to some extent, take on the responsibilities of teachers. Intelligent tutoring systems have the capacity to provide personalized and adaptive learning experiences

²⁹ Mathias Weber, - Florian Buschbacher, *Künstliche Intelligenz- Wirtschaftliche Bedeutung, gesellschaftliche Herausforderungen, menschliche Verantwortung* [Artificial Intelligence: Economic Significance, Societal Challenges, and Human Responsibility], (Bitkom e. V., DFKI, Berlin, Kaiserslautern), (2017), 29-31.

³⁰ Utz Schäffer, "KI sehe ich als zweite Welle der Digitalisierung [I see AI as the second wave of digitalization]", *Controlling & Management Review* 63, (2019), 18-23.

³¹ Lijia Chen, Pingping Chen - Zhijian Lin, "Artificial intelligence in education: A review.", *Ieee Access* 8, (2020), 75264-75266.

³² Katja Buntins, Insa Reichow - Faisal Rashid, "Eine Typologie zur Analyse des Einsatzes von KI-Methoden in der beruflichen Bildung [A Typology for Analyzing the Use of AI Methods in Vocational Education and Training]", *BWP* 53-1, (2024), 13-17. www.bwp-zeitschrift.de/dienst/publikationen/de/19392

by adapting to users' learning behaviours and performance. Such systems highlight AI's potential to provide personalized learning support and adapt to individual needs. Examples of intelligent tutoring systems that aim to deliver personalized learning experiences across various fields include *AutoTutor*, which utilizes natural language processing capabilities, and *Writing Pal*, which automatically analyses the quality of written texts.³³

Intelligent tutoring systems, while often associated with *strong AI* technologies, have yet to reach the capacity to fully replace human teachers. In education, they are typically utilised as supportive or complementary tools in teaching and learning processes. E-learning experts, particularly in the context of adult education and digital learning, view the large-scale adoption of these systems as unlikely and note that their current use needs to be improved in scope. To facilitate the broader and more effective implementation of intelligent tutoring systems in education, it is necessary to refine pedagogical approaches and enhance their acceptability among users.³⁴

Another significant application in AI and education is game-based learning, among the most promising technologies in education. This method holds the potential to enhance learners' motivation and foster engagement in learning processes, playing a particularly crucial role in individual learning experiences. For instance, games can strengthen self-directed learning motivation and thereby increase the willingness to engage in lifelong learning. However, in the context of adult education, this potential still needs to be utilised. Research and applications in this area are limited, and the full range of possibilities for employing game-based learning in adult education has yet to be explored. For broader adoption and effective integration, more comprehensive research and carefully planned implementations are required.³⁵

A significant barrier to the adoption of game-based learning in adult education is the negative perception many adults hold regarding the connection between games and learning.

³³ Arthur C. Graesser, "Conversations with AutoTutor help students learn.", *International Journal of Artificial Intelligence in Education* 26, (2016), 124-132; Niels Pinkwart, - Susan Beudt, "Künstliche Intelligenz als unterstützende Lerntechnologie [Artificial Intelligence as a Supportive Learning Technology]", *Fraunhofer-Institut für Arbeitswirtschaft und Organisation IAO*, (2020), 2-8; Graesser, "Conversations with AutoTutor help students learn", 124-132; Gabi Netz - Claudia Zanker., "'Tutorielle Begleitung im vhs-Lernportal: Online lernen—aber nicht allein.' weiter bilden [Tutoring Support in the vhs Learning Portal: Learning Online—But Not Alone]", *Die Zeitschrift für Erwachsenenbildung* 30.1, (2023), 37-39.

³⁴ Laura Fricke - Lena Zeller, "Tutorielle Begleitung als Element der propädeutischen Lehr-Lernseinheit 'Wissen schafft Praxis [Tutoring Support as an Element of the Propaedeutic Teaching-Learning Unit 'Knowledge Creates Practice']", (Hrsg. Klages, Benjamin, Bonillo, Marion, Reinders, Stefan - Bohmeyer, Axel) *Gestaltungsraum Hochschullehre. Potenziale nicht-traditionell Studierender nutzen*. Berlin: Budrich UniPress Ltd., (2015), 253-266. URN: urn:nbn:de:0111-pedocs-114466 -; Daniela Hartmann, "Künstliche Intelligenz im DaF-Unterricht? Disruptive Technologien als Herausforderung und Chance [Artificial Intelligence in Teaching German as a Foreign Language (DaF): Disruptive Technologies as a Challenge and Opportunity]", *Informationen Deutsch als Fremdsprache*, 48(6), (2021), 683-695; Orhan Kemal Çorbacı, "Din Eğitiminde Yapay Zekâ Uygulamalarına İlişkin Teknolojik Ve Pedagojik Yaklaşımlar: Zeki Öğretim Sistemleri (ZÖS) Örneği [Technological and Pedagogical Approaches to Artificial Intelligence Applications in Religious Education: The Example of Intelligent Tutoring Systems (ITS)]", *Din Eğitiminde Birey ve Ahlak*, Ed. H. Er (İstanbul, 2023), 30.

³⁵ Mark Bormann, Katharina Heyligers, Michael Kerres - Jörg Niesenhaus, "Spielend Lernen! Spielend Lernen? Eine empirische Annäherung an die Möglichkeit einer Synthese von Spielen und Lernen [Learning Through Play! Learning Through Play? An Empirical Approach to the Possibility of Synthesizing Play and Learning]", *Workshop Proceedings der Tagungen Mensch & Computer, DeLFI und Cognitive Design*, Berlin: Logos Verlag. ISBN: 978-3-8325-2007-6, (2008), 339-343; Son Le - Peter Weber, "Game-Based Learning-Spielend Lernen? [Game-Based Learning: Learning Through Play]", *Lehrbuch für Lernen und Lehren mit Technologien* (Berlin: epubli GmbH), (2011), 219-228.

For young adults especially, learning is seen as a serious, effort-driven activity, making it difficult to reconcile with gaming. This perception poses a challenge to the widespread use of game-based learning approaches. Similarly, integrating AI into education faces resistance, particularly in adult learning contexts, where there is skepticism about replacing traditional teaching methods and educators. While game-based learning and AI technologies have the potential to enhance educational environments, their complete substitution for traditional methods is currently impractical for adult learners. Effective integration of these technologies requires a strategic approach that considers not only technical factors but also pedagogical and psychological dimensions. These tools are better positioned as supportive elements that enhance, rather than replace, existing educational methods, particularly for adults.³⁶

Contemporary teaching and learning processes have increasingly integrated computer-supported learning environments as a constant feature. These digital platforms offer significant potential for enhancing teaching and learning processes, a possibility that is unlocked through the analysis of data generated within these platforms. Learning analytics focuses on leveraging this data to provide meaningful insights into educational processes for teachers and students. The primary goal of learning analytics is to optimise instructional processes and make learning experiences more efficient based on the collected data.³⁷ Sven Knöfel and Oliver Seils highlight the significant contributions of learning analytics within the context of adult education, mainly through the “Connected Personal Learning” model. This model promotes the use of data-driven analyses to understand learning processes better. LA enables teachers and students to gain detailed insights into learning activities, performance, and developmental progress. This capability facilitates personalising learning experiences, allowing individuals to achieve their goals more efficiently.³⁸

³⁶ Günther Dohmen, “‘Zum Verhältnis von ‘natürlichem’ und organisiertem Lernen in der Erwachsenenbildung [On the Relationship Between ‘Natural’ and Organized Learning in Adult Education]”, *Kommunikation in Lehr-Lern-Prozessen mit Erwachsenen* (Paedagogische Arbeitsstelle des DVV Frankfurt/M.), (1991), 133-147; Klaus Peter Treumann, Sonja Ganguin, Markus Arens, *E-Learning in der beruflichen Bildung* [E-Learning in Vocational Education and Training], (VS Verlag für Sozialwissenschaften), (2012), 180-275; Una Ponsold, “Planung, Entwicklung und Einsatz von Serious Games in der beruflichen Weiterbildung [Planning, Development, and Use of Serious Games in Vocational Training]”, *Magazin Erwachsenenbildung.at* 44/45, (2022), 1-7; Erich Herber, Bernhard Schmidt-Hertha - Sabine Zauchner-Studnicka, “Erwachsenen- und Weiterbildung. Technologieeinsatz beim Lernen und Lehren mit Erwachsenen [Adult and Continuing Education: The Use of Technology in Adult Learning and Teaching]” (Hrsg. Martin Ebner, Sandra Schön), *Lehrbuch für Lernen und Lehren mit Technologien*, (2013), 385-393; Denise Klinge, “Lehrende Algorithmen – spielend-behavioristische Lernanregungen von Apps als digitale Technologien [Teaching Algorithms: Playfully Behaviorist Learning Stimuli from Apps as Digital Technologies]”, (Hrsg. Franz, Julia, vd.), *Digitalisierung in der Erwachsenenbildung-Hessische Blätter für Volksbildung* 3, (2020), 65-73.

³⁷ Alessandro Barberi, Petra Missomelius - Christian Swertz, “Editorial 1/2018: Educational Data Mining und Learning Analytics: Möglichkeiten und Grenzen der Vermessung des digitalen Lernens [Editorial 1/2018: Educational Data Mining and Learning Analytics: Opportunities and Limitations of Measuring Digital Learning]”, *Medienimpulse* 56.1, (2018), 1-14; Julia Franz - Steffi Robak, “Digitalisierung in der Erwachsenenbildung – zur Einleitung in den Themenschwerpunkt [Digitalization in Adult Education: An Introduction to the Thematic Focus]”, *Hrsg. Franz, Julia, vd., Digitalisierung in der Erwachsenenbildung (Hessische Blätter für Volksbildung* 3), (2020), 4-9.

³⁸ Sven Knöfel - Oliver Seils, “Szenarien für die Entwicklung der Erwachsenenbildung: Ein Ausblick auf das Interaktionsdesign im Jahr 2025 [Scenarios for the Development of Adult Education: A Look at Interaction Design in 2025]”, (Hrsg. Schönebeck - Manfred-Pellert, Ada), *Von der Kutsche zur Cloud – globale Bildung sucht neue Wege* (Das Beispiel der Carl Benz Academy), (2016), 297-299.

Although learning analytics relies on automated analysis methods, human judgment is expected to remain an indispensable element in teaching processes. While data collection and processing occur through technological tools, teachers' expertise is crucial for interpreting and integrating this data into teaching and learning processes. For instance, teachers can use insights derived from analytics to reorganise lesson plans, revise learning objectives, and provide personalised guidance to students.³⁹ In addition, the use of insights offered by learning analytics and their integration into learning processes is primarily left to the student's responsibility. This gives students greater control over their learning processes and adapt data-driven approaches to their needs and preferences. Students can develop their learning strategies by creating more effective learning experiences. This approach aims to foster active participation from teachers and students, promoting the creation of a personalised and interactive learning environment.⁴⁰

Learning analytics highlights technology as a supportive mechanism that complements human roles in educational processes. This approach optimises educational experiences by providing teachers and students with in-depth insights into learning processes. While technology assumes a “complementary” function to make teaching processes more effective, the core roles in learning and teaching remain centered on human factors. As a critical component of the digital transformation in education, learning analytics enables teachers to improve their lessons and develop strategies tailored to students' needs. Simultaneously, students can manage their learning processes and personalise their learning experiences using data-driven insights. Teachers can utilise data from these technologies to better analyse students' strengths and weaknesses, offering more meaningful feedback. However, specific key considerations must be addressed to ensure the effective implementation of learning analytics. First, data-driven decision-making processes must be grounded in pedagogical principles. Additionally, adherence to ethical standards and educational values is essential. Particular attention must be paid to student privacy and data security, ensuring that these technologies support a human-centered approach—where technology functions as a tool rather than an end, learning and teaching are tailored to individuals' cognitive, social, and emotional needs, and human interaction, autonomy, and privacy are prioritised.⁴¹

Although research on AI and education has yet to achieve the desired level of integration of innovative technologies in teaching, it provides a substantial foundation for the future advancement of this field. Studies in the literature focus on analysing the current state and examining the potential impacts of hypothetical scenarios, highlighting that AI applications primarily play a supportive and augmentative role in educational processes. Key benefits of AI

³⁹ Corrine Büching, Dana-Kristin Mah, Stephan Otto, Prisca Paulicke - Ernst A. Hartman, “Learning Analytics an Hochschulen [Learning Analytics in Higher Education]”, Hrsg. Wittpahl, Volker: *Künstliche Intelligenz* (Berlin: Springer), (2019), 155-159.

⁴⁰ Knöfel - Seils, “Szenarien für die Entwicklung der Erwachsenenbildung: Ein Ausblick auf das Interaktionsdesign im Jahr 2025”, 299-300.

⁴¹ Michael Kerres, - Katja Buntins Burtins, “Erwachsenenbildung in der digitalen Welt: Handlungsebenen der digitalen Transformation [Adult Education in the Digital World: Action Levels of Digital Transformation]”, (Hrsg. Franz, Julia, vd.), *Digitalisierung in der Erwachsenenbildung-Hessische Blätter für Volksbildung* 3, (2020), 11-21; Lipp, Dreisiebner - Stock, “Das Potenzial von Learning Analytics in der Berufsbildung”, 173-183.

in education include reducing teachers' workloads, personalising learning processes, and enhancing students' learning experiences.⁴² However, for technological innovations to reach their full potential, comprehensive evaluations must be conducted from a technical perspective and from pedagogical, ethical, and societal angles. In this context, interdisciplinary collaboration and the development of concrete applications are critically important. To achieve a more significant impact on the relationship between AI and education, technological advancements must be integrated into educational contexts to preserve the complementary role of human-based teaching practices. Within this framework, it is anticipated that the synergy between AI and education could lead to more effective outcomes in the future.⁴³

4. Augmentation Strategies, Pedagogical Roles, and the Context of Adult Religious Education

AI holds significant potential in educational processes, either by fully assuming teachers' responsibilities or by supporting them. Specifically, AI contributes by transforming traditional classroom roles, alleviating teachers' workload in time-consuming and repetitive tasks, monitoring student performance, conducting assessments, and providing feedback. Moreover, with its capabilities for in-depth data analysis, AI enables teachers to track students' learning processes and offer personalised guidance more effectively. However, the notion that AI could completely replace human teachers remains controversial. Human educators play an indispensable role in areas requiring emotional intelligence, such as empathy, motivation, value transmission, and the development of social skills.⁴⁴

In adult religious education, the interaction between augmentation (enhancement, improvement, and support) and substitution strategies represents a compelling topic of discussion regarding integrating modern technological advancements into educational processes. From a cognitive science perspective, it is evident that systems referred to as *strong AI*, capable of fully replicating human intelligence, have yet to be developed. However, significant progress has been made, mainly since the late 20th century, in systems classified as *weak AI* that effectively perform specific tasks. These advancements have had notable impacts in the field of education.⁴⁵

Among the tools developed in AI and Education, intelligent tutoring systems, game-based learning, and learning analytics stand out. These tools are designed to support personalised learning experiences, enhance the effectiveness of instructional materials, and provide detailed data analyses for learning processes. Rather than replacing teachers, these technologies aim to

⁴² Fabian Zehner, "Künstliche Intelligenz in der Bildung. Ihr Potenzial und der Mythos des Lehrkraftroboters [Artificial Intelligence in Education: Its Potential and the Myth of the Teacher Robot]", *Schulmanagement* 50-2, (2019), 8-11.

⁴³ Thomas Knaus, "Künstliche Intelligenz und Pädagogik – ein Plädoyer für eine Perspektiverweiterung [Artificial Intelligence and Pedagogy: A Plea for a Broader Perspective]", *Ludwigsburger Beiträge zur Medienpädagogik* 24, (2024), 1-26.

⁴⁴ Douglas C. Engelbart, "Augmenting human intellect: A conceptual framework.", *Augmented Education in the Global Age*. (Routledge), (2023), 13-20.

⁴⁵ Moritz Kirste, "Augmented Intelligence – Wie Menschen mit KI zusammen arbeiten [Augmented Intelligence: How Humans Collaborate with AI]", (Hrsg. Volker Wittpahl), *iit-Themenband Künstliche Intelligenz Technologie | Anwendung | Gesellschaft*, Berlin: Springer Vieweg, (2019), 60; Kirste - Schürholz, "Einleitung: Entwicklungswege zur KI: Künstliche Intelligenz: Technologie|Anwendung| Gesellschaft", 21.

complement and support their functions. For instance, an intelligent tutoring system can analyse a student's learning pace and needs, offering personalised recommendations. However, it cannot fully substitute a teacher's pedagogical expertise and guidance skills. Similarly, game-based learning tools make learning processes more engaging and motivating, but they cannot replace teachers in fostering complex social and emotional skills.⁴⁶

These examples highlight the transformative potential of AI in education while underscoring that resistance to such technologies, particularly in adult religious education, must be reconsidered in light of the demands of the digital age. However, effectively defining the role of AI in education requires aligning technological capabilities with educational objectives. Using AI as a supportive tool in instructional processes necessitates prioritising augmentation strategies over complete substitution. Augmentation strategies are considered foundational for pedagogical and technological transformation in educational processes.⁴⁷ Augmentation strategies provide an approach in academic research and represent a preparatory phase for transitioning to substitution strategies. However, challenges such as the acceptance of AI systems by educators and students, the adequacy of technological infrastructure, and ethical responsibilities emerge as significant issues in this process. Addressing these challenges could lay the groundwork for a more realistic substitution strategy.⁴⁸

The limitations of *strong AI* technologies do not necessitate the exclusion of AI from educational processes. On the contrary, purpose-built weak AI systems provide significant support in personalised learning experiences, data-driven feedback mechanisms, and adaptive teaching methods. In the context of the digitalisation of adult religious education, the supportive and enhancement-oriented impact of these systems on learning processes is particularly noteworthy. However, it must be emphasised that human judgment and pedagogical skills remain indispensable in education. The role of AI in educational processes should primarily be addressed within the framework of augmentation strategies to create a balanced and sustainable model for educators and learners.⁴⁹

5. Adult Religious Education: Personalized Learning, Technological Innovations, and Human-Centered Approaches

Adulthood extends beyond merely surpassing a certain age; it denotes the phase in which an individual's capacity for autonomous decision-making and assumption of responsibility matures, and the ability to plan and direct one's own learning processes is acquired.⁵⁰ Within this stage, religious education entails the critical reevaluation and deepening of one's

⁴⁶ Kirste, "Augmented Intelligence – Wie Menschen mit KI zusammen arbeiten", 58-68.

⁴⁷ Wenke Apt - Kai Priesack, "KI und Arbeit – Chance und Risiko zugleich [AI and Work – Both an Opportunity and a Risk]", (Herausgeber Prof. Dr. Volker Wittpahl), *iit-Themenband Künstliche Intelligenz Technologie | Anwendung | Gesellschaft*, (Springer Vieweg), (2019), 224-234.

⁴⁸ Christoph Meier, Sabine Seufert - Josef Guggemos, "Arbeitswelt 4.0 und Smart Machines: Augmentation als Herausforderung für die Personalentwicklung [Work 4.0 and Smart Machines: Augmentation as a Challenge for Human Resource Development]", *HMD Prax. Wirtsch.* 56.4, (2019), 823-833.

⁴⁹ Apt - Priesack, "KI und Arbeit – Chance und Risiko zugleich", 222-223.

⁵⁰ Firdevs Güneş-Tanju Deveci, "Yetişkin Eğitimi Ve Hayat Boyu Öğrenme [Adult Education and Lifelong Learning]", *Ankara: Pegem Akademi* (2020), 1-17.

foundational beliefs in harmony with lived experiences, as well as the updating of religious knowledge and practices through self-directed and problem-centered approaches. In adult education generally, the primary determinants of learning include the learner's intrinsic motivation, preexisting knowledge base, capacity for self-management of the learning process, and environmental conditions such as social support networks and accessible digital tools.⁵¹

Before the 12th century, education was primarily directed toward adults; during the early period of Islam, the Prophet prioritized the education of adults and the training of educators. However, with the establishment of schools in modern times, children's education has gained prominence, and religious education has primarily concentrated on children and youth. Critics of this trend argue that the true target audience of religion is adults; consequently, it is advocated that the focus of religious education should be shifted back to adults. It is suggested that, especially in the preschool years, rather than providing direct religious content to children, it would be more beneficial to create an environment that evokes love and curiosity, as direct religious instruction at an early age may lead to negative prejudices. Furthermore, it is emphasized that a profound understanding of religion generally occurs during adulthood and that elderly individuals require religious education to add meaning to their lives and to deepen their beliefs. In light of these perspectives, it becomes evident that religious education programs need to be redesigned to align with the interests and needs of adults, adopting an approach that fosters critical thinking and facilitates a better understanding of religious values.⁵²

In adult religious education, AI's transformative potential can be harnessed to create learning environments that address the unique needs and characteristics of adult learners. Unlike traditional classroom settings dominated by didactic teaching, adult education emphasizes self-directed learning, experiential knowledge, and personal growth. AI-powered adaptive learning systems can personalize religious content by considering each learner's background, prior experiences, and specific learning objectives, thus ensuring that complex theological and ethical concepts are introduced at an appropriate pace. Data-driven analysis and feedback mechanisms further enhance this process by providing educators with real-time insights into individual progress, allowing for the refinement of teaching strategies and the development of targeted interventions to deepen understanding. Additionally, gamified learning environments and interactive digital tools can revitalize adult religious education by introducing elements such as challenges, rewards, and collaborative activities, thereby fostering a dynamic and engaging space for reflective practice and critical dialogue.⁵³ AI also plays a crucial role in language and intercultural education by leveraging advanced natural language processing to translate and contextualize religious texts, making them more accessible to adult learners from diverse cultural and linguistic backgrounds. By integrating these AI-driven

⁵¹ M. Akif Kılavuz, "Yetişkinlik ve Yaşlılık Döneminde Eğitim ve Din Eğitiminin Önemi [The Importance of Education and Religious Education in Adulthood and Old Age]", *Uludağ Üniversitesi İlahiyat Fakültesi Dergisi* 11.2 (2002), 59-72.

⁵² Kılavuz, "Yetişkinlik ve Yaşlılık Döneminde Eğitim ve Din Eğitiminin Önemi", 66-71; Hasan Dam, "Yetişkinlere Göre Yetişkin Din Eğitimi [Adult Religious Education from the Perspective of Adults]", *Değerler Eğitimi Dergisi* 1.4, (2003), 31-53.

⁵³ Ülfet Görgülü-Sena Kesgin, "Yapay Zekâ Robotlara Ahlâki ve Hukuki Statü Tanınması Problematikliği -İslam Ahlâki ve Hukuku Açısından Bir Değerlendirme- [The Problematics of Granting Moral and Legal Status to Artificial Intelligence Robots: An Evaluation from the Perspective of Islamic Ethics and Law]", *Recep Tayyip Erdoğan Üniversitesi İlahiyat Fakültesi Dergisi* 20 (Aralık 2021), 56-58.

approaches, adult religious education can evolve into a more personalized, reflective, and inclusive field—one that not only enhances content delivery and pedagogical processes but also preserves and enriches the spiritual, ethical, and communal dimensions essential to religious learning in the modern digital era.⁵⁴

• *Personalized Learning and Adaptive Systems:* Artificial intelligence (AI) can tailor educational trajectories to align with the individual learning pace, prior knowledge, and specific interests of adult learners.⁵⁵ In the context of adult religious education, AI facilitates the development of personalized and adaptive curricula by delivering bespoke content and modular instruction that reflect each learner's unique profile. For instance, platforms typically begin by evaluating a learner's foundational doctrinal understanding and historical context to pinpoint areas requiring further development. Based on this diagnostic process, they subsequently recommend targeted instructional resources—drawing upon expert analyses, historical case studies, and interactive media—in key areas such as liturgical practices, sacred text interpretation, and ethical considerations. Moreover, by incorporating contextual clarifications, moderated discussion forums, virtual study groups, and formative assessment tools, these systems continuously refine and reinforce the learning process. This integrative AI-driven approach transforms adult religious education into a more individualized, interactive, and effective pedagogical practice, significantly enhancing the depth of learners' spiritual insights, fostering critical thinking skills, and facilitating the seamless integration of religious knowledge into everyday life.⁵⁶

⁵⁴ Tobias Schmohl, Alice Watanabe - Kathrin Schelling, "Künstliche Intelligenz in der Hochschulbildung: Chancen und Grenzen des KI-gestützten Lernens und Lehrens [Artificial Intelligence in Higher Education: Opportunities and Limitations of AI-Supported Learning and Teaching]", (Hrsg. Tobias Schmohl, Alice Watanabe, Kathrin Schelling), *Künstliche Intelligenz in der Hochschulbildung. Chancen und Grenzen des KI-gestützten Lernens und Lehrens*. (Bielefeld: Hochschulbildung: Lehre und Forschung, 2023), 10.

⁵⁵ Büching, vd., "Learning Analytics an Hochschulen", 153; Maren Lübcke, Johannes Schrupf, Funda Seyfeli-Özhizalan - Klaus Wannemacher, "Künstliche Intelligenz zur Studienindividualisierung Der Ansatz von SIDDATA [Artificial Intelligence for Individualizing Studies: The SIDDATA Approach]", (Hrsg. Schmohl, Tobias, Watanabe, Alice, Schelling, Kathrin), *Künstliche Intelligenz in der Hochschulbildung. Chancen und Grenzen des KI-gestützten Lernens und Lehrens*, (Bielefeld: Hochschulbildung: Lehre und Forschung, (2023), 213-226; Sevim Ünal, "İbadetlerle İlgili Fetvalar Ve Yapay Zekâ Uygulamaları: Karşılaştırmalı Bir Analiz [Fatwas on Worship and Artificial Intelligence Applications: A Comparative Analysis]", *Dinbilimleri Akademik Araştırma Dergisi* 24/3 (Aralık 2024), 170-182. <https://doi.org/10.33415/daad.1580752>.

⁵⁶ Question: "Can you define the concept of Taqwa?"

Response from ChatGPT:

"Taqwa is a frequently used term in Islam, carrying profound meanings. Linguistically, it derives from the Arabic root "wqaya," which means "protection" or "guarding." In terminology, Taqwa refers to an individual's conscious effort to revere Allah, obey Him deliberately, and guard oneself from spiritual dangers by avoiding prohibited acts.

In the Qur'an and Hadith, Taqwa encompasses a person's awareness of their responsibilities to Allah and a commitment to living in accordance with His commands and prohibitions. It plays a central role in achieving spiritual maturity and embodying moral values.

In the Qur'an, those who possess Taqwa are referred to as "muttaqin." These individuals are promised closeness to Allah, guidance, and Paradise as their reward (Surah Al-Baqarah, 2:2-5). Taqwa is not limited to acts of worship but also extends to ethical conduct, social interactions, and one's way of life.

The Two Core Aspects of Taqwa:

Worship and Obedience: Fulfilling Allah's commands, avoiding His prohibitions, and practicing deliberate servitude.

Spiritual Guarding: Striving to attain Allah's pleasure by refraining from sinful actions and resisting base desires.

• *Data-Driven Analysis and Feedback:* Data-driven analysis and feedback in adult religious education involve using AI to identify learners' strengths and challenges.⁵⁷ For example, in Qur'anic recitation training, AI detects pronunciation errors and creates a tailored training plan. Similarly, in broader adult religious education, AI monitors performance through quizzes, forum participation, and multimedia engagement, and then provides targeted resources—such as readings, interactive modules, or webinars—to address learning gaps. This personalized approach not only helps educators refine their teaching strategies but also promotes self-directed improvement among adult learners, ultimately fostering a more adaptive learning environment.⁵⁸

• *Gamified Learning and Interactive Tools:* By integrating gamification and interactive elements, AI transforms adult religious education into a more engaging and stimulating experience.⁵⁹ For instance, a digital platform could feature gamified Q&A modules on core religious topics, enhanced with scoring systems, badges, and leaderboards to drive active learner participation. Additionally, incorporating scenario-based challenges and narrative-driven activities—coupled with immersive technologies such as virtual and augmented reality—can recreate ethical dilemmas and historical events, thereby deepening learners' contextual understanding and fostering critical thinking skills.⁶⁰

In conclusion, Taqwa is an awareness of Allah that encompasses both internal states and external behaviors, representing a holistic lifestyle. As one of the foundational concepts of Islamic ethics, Taqwa aims to ensure an individual's peace in this world and eternal salvation in the hereafter" <https://chatgpt.com/c/675443d2-e914-8001-a5c2-ea72fdb9888c>

⁵⁷ Büching, vd., "Learning Analytics an Hochschulen", 153-154; Schmohl, vd., "Künstliche Intelligenz in der Hochschulbildung: Chancen und Grenzen des KI-gestützten Lernens und Lehrens Eine Einführung in die Beiträge des Bandes", 10-11.

⁵⁸ Error Analysis (Ayn Letter):

Error Description:

The letter Ayn (ع) is a sound produced from the throat. When it is not properly pronounced, it is often replaced with an "a" or "e" sound. This can lead to Tajweed errors and shifts in meaning when reciting the Qur'an.

Example of Error:

The word "عَلِيم" (Alim, "All-Knowing") may be misread as "alim," altering both the pronunciation and meaning.

Error Correction:

Teach the correct articulation point of the Ayn sound through throat exercises.

Utilize audio and visual aids to practice accurate pronunciation.

Encourage slow and deliberate recitation to develop the correct habit. <https://chatgpt.com/c/674c3f7c-ed50-8001-ab85-7ef295932de9>

⁵⁹ Klinge, "Lehrende Algorithmen – spielend-behavioristische Lernanregungen von Apps als digitale Technologien", 65-73.

⁶⁰ Game: Religious Knowledge Challenge

Rules: Each correct answer earns 10 points. No points are awarded for incorrect answers. Answer all the questions and see your total score!

Question 1: What is the first command in Islam?

- A) Believe
- B) Read
- C) Perform prayer
- D) Be patient

Correct Answer: B) Read

Explanation: The first command in Islam is "Read" (Surah Al-Alaq, 1), emphasizing learning and knowledge.

Question 2: In which city is the Hajj pilgrimage performed?

- A) Medina
- B) Mecca

• *Language and Intercultural Religious Education*: In adult religious education, the critical importance of approaches that are sensitive to cultural and linguistic diversity is underscored, with artificial intelligence playing a pivotal role in this transformation.⁶¹ Advanced translation services and multilingual teaching platforms facilitate access to complex religious content; for instance, in courses from various religious traditions, classical commentaries are automatically translated into languages such as English, Arabic, and Turkish. Moreover, AI-supported systems enrich the presentation of rituals, traditions, and doctrinal interpretations by incorporating interactive elements—such as virtual tours, multimedia presentations, and scenario-based discussions—that provide essential cultural context. Collectively, these strategies not only enable a deeper understanding of religious concepts but also strengthen intercultural dialogue, thereby fostering the development of an inclusive and dynamic learning environment.⁶²

C) Jerusalem

D) Damascus

Correct Answer: B) Mecca

Explanation: Hajj is an act of worship performed in Mecca, where the Kaaba is located.

(...)

Results:

Calculate your total score:

10 points for each correct answer.

50 Points: Excellent, your religious knowledge is outstanding!

30–40 Points: Great job, keep learning!

10–20 Points: A solid start, keep exploring!

0 Points: No worries, use this opportunity to learn! 😊. <https://chatgpt.com/c/674c3f7c-ed50-8001-ab85-7ef295932de9>

⁶¹ Bresinsky, vd., "Wie die Maschine uns narrt.", 113; Zehner, "Künstliche Intelligenz in der Bildung. Ihr Potenzial und der Mythos des Lehrkraftroboters", 4-6; Europäische Kommission, Generaldirektion Bildung, Jugend, Sport und Kultur, "Ethische Leitlinien für Lehrkräfte über die Nutzung von KI und Daten für Lehr- und Lernzwecke [Ethical Guidelines for Educators on the Use of AI and Data for Teaching and Learning Purposes]" (Amt für Veröffentlichungen der Europäischen Union), (14/2022), 34-36; Ahmet Çakmak, vd. "Din Eğitimi Biliminin Temel Konularında ChatGPT Yapay Zeka Uygulama Verilerinin Güvenirliliği [The Reliability of ChatGPT Artificial Intelligence Application Data on Fundamental Topics of the Science of Religious Education]". *Dinbilimleri Akademik Araştırma Dergisi* 24/3 (Aralık 2024), 337-340, 347. <https://doi.org/10.33415/daad.1590460>.

⁶² Easter Egg and Egg Decorating Tradition

Easter is one of the most significant Christian celebrations, commemorating the resurrection of Jesus Christ. One of its prominent symbols is the Easter egg, which represents resurrection and new life in Christianity. The practice of decorating and painting eggs is a cultural aspect of this ritual.

Historical and Religious Background

The egg has long been regarded as a symbol of rebirth and life. Christianity adopted this symbolism to represent the resurrection of Jesus Christ.

During the Middle Ages, eggs were forbidden during Lent, the period of fasting and penance. As a result, eggs collected during Lent were preserved and painted for the Easter celebration.

The Ritual in Practice

- **Egg Painting:** Traditionally, eggs are painted red, symbolizing the blood shed by Jesus on the cross. Today, however, various colors and patterns are used. Egg painting is often a fun activity, especially for children, bringing families together for the event.
- **Easter Egg Hunt:** This is a playful ritual organized for children. Decorated eggs are hidden in grassy areas or gardens, and children search for them. This activity promotes sharing and enjoyment.
- **Egg Cracking Contest:** Participants test the durability of their decorated eggs by hitting them against one another. The person with the unbroken egg is considered "lucky."

Cultural Variations

- **In Orthodox Churches:** Eggs are typically painted red and blessed during religious services as part of Easter celebrations.

Alan Turing and John Searle's theories on AI can be utilised to evaluate the contributions of AI to religious education. Turing's understanding of modelling human-like learning processes provides insights into how AI can be employed in personalised learning environments. His theory highlights AI's potential to facilitate learning by simulating human behaviour.⁶³ In contrast, John Searle's distinction between *strong AI* and *weak AI* offers an opportunity to discuss the limitations of current technologies and their implications for educational processes. Searle's critiques remind us that, due to its lack of consciousness, AI can only serve as a tool in value-centered fields such as religious education.⁶⁴

Religious education extends beyond transmitting knowledge to encompass uniquely human aspects, such as developing emotional intelligence, fostering ethical awareness, and cultivating a sense of social belonging. The limitations of AI in these areas must be considered, and its role in educational processes should be evaluated accordingly. These limitations can be articulated as follows:

- *Empathy and Value Transmission:* AI cannot perform profound human functions such as conveying religious values or fostering empathy in an individual's spiritual journey. Empathy requires understanding an individual's emotional and spiritual needs, providing appropriate guidance, and responding effectively.⁶⁵ For example, while AI can technically teach how to perform an act of worship, it cannot convey the profound spiritual meaning of that worship or help the individual internalise its significance. This limitation restricts the emotional and spiritual interaction at the heart of religious education.

- *Ethical and Consciousness Limitations:* AI cannot make ethical decisions or conscious choices.⁶⁶ In religious education, enhancing an individual's moral awareness helps them understand the nuanced distinction between right and wrong and develop their value judgments. However, AI does not possess the inner depth or intuition required for such conscious and spiritual guidance. Its decisions are based on data-driven and mechanical processes. Therefore, it cannot fulfil functions such as fostering spiritual depth, essential in religious education.

- *The Importance of Human-Centered Models:* Religious education is a field that requires profound human depth, and the guidance of a teacher provides irreplaceable human interaction.

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- In Western Europe and the United States: Eggs are not only symbolic but also crafted as chocolates or candies, which are given as gifts to children.

Educational and Spiritual Dimensions

This ritual strengthens family and community bonds while serving as a symbolic expression of Jesus' resurrection. It also conveys a message of new beginnings and hope through the use of Easter eggs.

As both a religious and cultural tradition, this ritual continues to be practiced in diverse forms across different societies. <https://chatgpt.com/c/674ffb0a-bafc-8001-913c-09f36d18efb0>

⁶³ Turing, "Computing Machinery and Intelligence", 433-460.

⁶⁴ Searle, "Minds, brains, and programs", 417-457.

⁶⁵ Joachim Rathmann, "Künstliche Intelligenz im Umweltschutz: Möglichkeiten und Grenzen [Artificial Intelligence in Environmental Protection: Opportunities and Limitations]", (Hrsg. Joachim Rathmann - Uwe Voigt), *Natürliche und Künstliche Intelligenz im Anthropozän*, (wbG Academic, 2021), 263-268.

⁶⁶ Europäische Kommission, Generaldirektion Kommunikationsnetze, Inhalte und Technologien, "Ethik-leitlinien für eine vertrauenswürdige KI [Ethical Guidelines for Trustworthy AI]" (Publications Office), (2019), 2-50; Uwe Meixner, "Bewusstseinsintelligenz und Künstliche Intelligenz [Conscious Intelligence and Artificial Intelligence]", (Hrsg. Joachim Rathmann - Uwe Voigt), *Natürliche und Künstliche Intelligenz im Anthropozän*, (wbG Academic, 2021), 13-31.

Teachers can establish personal relationships with students, offering advice tailored to their emotional and spiritual needs. Moreover, they can provide meaningful and contextually appropriate answers to individual questions, personalising the learning process. Conversely, AI can only serve as a supportive tool and cannot fully assume the teacher's role as a guide in this context.⁶⁷

AI has the potential to develop more inclusive, personalised, and innovative approaches in religious education in the future. This potential enables enriching religious education experiences through tools such as big data analytics, virtual reality technologies, and online community platforms.⁶⁸

- *Big Data*: Big data analytics is a powerful technology that analyses users' learning behaviours and individual interest levels in religious knowledge. It offers significant opportunities to understand how adults access religious information, their learning pace, the types of content they are most interested in, and the topics they find challenging. In this context, big data facilitates the creation of personalised religious education content tailored to the specific needs of each individual.⁶⁹ For instance, if a user is interested in Islamic jurisprudence (*fiqh*), the system can recommend more detailed content, offering a personalised learning experience. Additionally, challenges individuals face in their learning processes can be analysed to develop more effective instructional materials. The general religious tendencies of communities can also be examined through big data, enabling religious education to be more contextually relevant in a social framework.

- *Virtual Reality*: Virtual reality technologies allow individuals to learn and practice an act of worship or ritual in a virtual environment before experiencing it physically.⁷⁰ This technology is particularly effective for worship education, which requires practical learning. Virtual reality technologies can facilitate the teaching of complex rituals such as *Hajj* or *Umrah* in a virtual environment, helping individuals prepare for these acts of worship. Details such as how to perform *tawaf* or the rules of *ihram* can be conveyed visually and interactively in a virtual setting. Additionally, for individuals learning how to perform prayer (*salat*), virtual reality can provide visual guidance to ensure the correct execution of postures and movements. Moreover, users can virtually experience the atmosphere of significant historical and spiritual sites, such

⁶⁷ Europäische Kommission, Generaldirektion Bildung, Jugend, Sport und Kultur, "Ethische Leitlinien für Lehrkräfte über die Nutzung von KI und Daten für Lehr- und Lernzwecke", 18; Lübcke, vd., "Künstliche Intelligenz zur Studienindividualisierung Der Ansatz von SDDATA", 214-225.

⁶⁸ Deniz Şenocak, "Açık ve uzaktan öğrenme ortamlarında yapay zekâ: Sunduğu fırsatlar ve yarattığı endişeler [Artificial Intelligence in Open and Distance Learning Environments: Opportunities and Concerns]", *Açıköğretim Uygulamaları ve Araştırmaları Dergisi* 6/3 (2020), 56- 78

⁶⁹ Hesse, "Das Zerstörungspotenzial von Big Data und Künstlicher Intelligenz für die Demokratie.", 339-346; Europäische Kommission, Generaldirektion Bildung, Jugend, Sport und Kultur, "Ethische Leitlinien für Lehrkräfte über die Nutzung von KI und Daten für Lehr- und Lernzwecke", 33; Knaus, "Künstliche Intelligenz und Pädagogik – ein Plädoyer für eine Perspektiverweiterung", 3.

⁷⁰ Jens Schröter, *Das Netz und die virtuelle Realität: Zur Selbstprogrammierung der Gesellschaft durch die universelle Maschine* [The Web and Virtual Reality: On Society's Self-Programming Through the Universal Machine], Transcript Verlag, (2004), 156-206; Europäische Kommission, Generaldirektion Bildung, Jugend, Sport und Kultur, "Ethische Leitlinien für Lehrkräfte über die Nutzung von KI und Daten für Lehr- und Lernzwecke", 36.

as the Prophet's Mosque (*Masjid al-Nabawi*), the Kaaba, or Jerusalem, with the help of virtual reality.

• *Online Forums:* AI-powered online platforms enable individuals to ask religious questions, explore diverse perspectives, and actively participate within a community. These platforms provide a space that supports individual learning and the collective search for spiritual meaning within a community. Users can pose their religious questions anonymously or within a community and receive instant responses from experts or AI-based systems. Perspectives rooted in various denominations, cultures, or theological approaches contribute to users gaining a broader understanding. Furthermore, through an online community, users can exchange ideas with like-minded individuals and benefit from the support of a network that shares similar interests.⁷¹

AI has the potential to offer personalised, accessible, and innovative learning experiences in adult religious education. However, it must be remembered that AI should only be used as a supportive tool in a spiritual and value-oriented field like religious education. The advantages provided by technology should be balanced with the indispensable role of teachers and human elements. Therefore, integrating AI into religious education should be approached with a human-centered perspective and in alignment with ethical principles. It should be designed to contribute to individuals' spiritual and moral development under the guidance of teachers.

Conclusion

The integration of AI technologies into education has the potential to profoundly transform teaching processes. Specifically, in the context of adult religious education, AI's capacity to support personalized learning experiences, facilitate teaching processes, and respond more effectively to learners' needs can enhance the efficiency and impact of education. However, realising this potential requires careful consideration of the limitations of technology, its ethical dimensions, and the indispensable importance of human-centered education.

AI in education should prioritise reducing the workload of religious educators and supporting their roles rather than entirely replacing them. Augmentation strategies highlight AI's potential to collaborate with teachers in enriching learning processes and providing customised solutions tailored to individual needs. For instance, personalised learning systems and significant data analytics offer opportunities to optimise learning processes. In contrast, virtual reality technologies and game-based learning tools enhance motivation and contribute to more effective learning. However, in a field like religious education, where spiritual and ethical values are central, it is evident that critical roles such as emotional intelligence, empathy, and value transmission performed by teachers cannot be replaced by AI.

The role of AI in religious education gains significance when employed as a supportive tool. Under the guidance of teachers, AI can serve the purposes of religious education by contributing

⁷¹ Joachim Rekonstruktion der Kommunikation des betrieblichen Ausbildungspersonals in Online-Foren. Eine computerlinguistische Analyse des Online-Forums foraus.de [Reconstruction of Communication by Vocational Training Personnel in Online Forums: A Computational Linguistic Analysis of the Online Forum foraus.de], *Zeitschrift für Erziehungswissenschaft*, (2024), 1-22.

to individuals' spiritual, ethical, and emotional development. However, this process must address data security, privacy, and adherence to moral principles with utmost care. Adopting a model where AI supports a human-centered approach to education can harmoniously integrate technological innovations with pedagogical values.

AI holds transformative potential in religious education and educational processes in general. However, for these technologies to be implemented effectively and ethically, the roles of teachers must be preserved, and technological advancements must be integrated with a human-centered approach. A balanced combination of technology and pedagogy will define the future role of AI in education. In this process, teachers will be able to leverage the innovations offered by AI to deliver more effective and comprehensive education.

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