

THE NEGATIVE IMPACT OF MODERN WESTERN SCIENCE FROM THE PERSPECTIVE OF ISLAMIC THEOLOGY

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Abstrak: Penelitian ini membahas dampak sains Barat modern terhadap keimanan dan tanggung jawab manusia sebagai khalifah di bumi dalam perspektif teologi keislaman. Dampak negatif sains modern meliputi pelemahan keimanan, kerusakan lingkungan, eksploitasi sumber daya alam, dan ancaman terhadap tanggung jawab manusia sebagai khalifah. Penelitian ini menggunakan metode deskriptif kualitatif dengan pendekatan studi literatur. Data dikumpulkan dari berbagai sumber, seperti buku, jurnal, dan artikel ilmiah. Hasil penelitian menunjukkan bahwa sains Barat modern memiliki beberapa dampak negatif terhadap keimanan dan tanggung jawab manusia sebagai khalifah. Dampak negatif ini disebabkan oleh beberapa faktor, seperti sekularisme, materialisme, dan antroposentrisme. Penelitian ini merekomendasikan beberapa solusi untuk mengatasi dampak negatif sains modern, antara lain: Mengembangkan paradigma sains Islam yang mengintegrasikan ilmu pengetahuan dan agama. Memperkuat pendidikan Islam untuk menanamkan nilai-nilai moral dan spiritual. Meningkatkan kesadaran masyarakat tentang dampak negatif sains modern melalui edukasi dan kampanye. Dengan membangun paradigma sains yang seimbang, bermoral, dan bermartabat, serta meningkatkan kesadaran dan tanggung jawab manusia sebagai khalifah di bumi, kita dapat memanfaatkan kemajuan sains modern untuk kebaikan dan kemaslabatan umat manusia, selaras dengan nilai-nilai teologi keislaman.

Kata Kunci: Sains Barat modern, Teologi Islam, Integrasi Ilmu Pengetahuan dan Agama.

Judul: Dampak Negatif Ilmu Pengetahuan Barat Modern dalam Perspektif Teologi Islam

Abstract: This research explores the impact of modern Western science on faith and human responsibility as a caliph on Earth from an Islamic theological perspective. The negative impacts of modern science include the weakening of faith, environmental degradation, exploitation of natural resources, and threats to human responsibility as a caliph. This study employs a qualitative descriptive method using a literature study approach. Data were collected from various sources, including books, journals, and scientific articles. The findings reveal that modern Western science has several detrimental effects on faith and human responsibility as a caliph. These negative impacts stem from factors such as secularism, materialism, and anthropocentrism. The study recommends several solutions to address the negative consequences of modern science, including: Developing an Islamic science paradigm that integrates knowledge and religion. Strengthening Islamic education to instill moral and spiritual values. Raising public awareness about the negative impacts of modern science through education and campaigns. By establishing a balanced, ethical, and dignified science paradigm, fostering human awareness and responsibility as a caliph on Earth, we can harness the advancements of modern science for the betterment and well-being of humanity, in harmony with Islamic theological values.

Keywords: Modern Western Science, Islamic Theology, Integration of Science and Religion.



INTRODUCTION

The advancement of science and technology has significantly changed human life, impacting our thinking, behavior, lifestyles, and conduct. Numerous discoveries and their developments have enabled humans to better understand, control, and manipulate the natural world for their own benefit and well-being. According to Ali Anwar, science can be defined simply as a collection of human knowledge obtained through an empirical process that is acceptable to reason, while technology is the application of science to control the environment in a productive and economic manner, yielding something beneficial for humanity.¹ The progress achieved by modern Western science has led to various revolutions in the field of technology. These revolutions have produced a range of benefits for people, such as saving time and energy, reducing distances, facilitating transportation, and providing other conveniences.

It's undeniable that the advancement of science and technology has become increasingly sophisticated and high-quality, allowing almost every aspect of human life to enjoy the products of modern technology, from simple household appliances to large industrial equipment. With all these advancements, life appears easier, faster, and more enjoyable. However, on the flip side, science and technology have also created numerous problems in life, including issues in social, economic, political, and environmental domains. Environmental degradation includes pollution on land, in the sea, in rivers, and in the air.

In Islam, several fundamental principles can be used to evaluate ethical issues related to science and technology. The first principle is that everything created by Allah SWT has value and should be respected. The second principle is that humans must act as stewards (khalifah) on Earth, meaning they must manage and use natural resources wisely and responsibly. The third principle is that humans must always prioritize *maslahah* (goodness) and avoid *mafsadah* (evil) in all their actions. The implications of modern Western science on the environment from an Islamic theological perspective encompass the views of scholars on the global ecological crisis, which is inseparable from the modern human worldview, as well as the characteristics of modern Western science that have the potential to cause negative environmental impacts. Additionally, the document discusses the separation of science and religion in the West during the Age of Enlightenment and modernity, and its implications for humanity's view of nature.

Observing the state of the environment has led to many assumptions, ranging from questioning the government's role in environmental conservation to the impact of advancements in science and technology. According to academics, environmental degradation is linked to the progress of science and technology. While it's undeniable that

¹ Ali Anwar Yusuf, *Islam dan Sains Modern : Sentuhan Islam Terhadap Berbagai Disiplin Ilmu*, (Bandung : Pustaka Setia, 2006). Hal. 279.

scientific discoveries and technological advancements have made life easier, reduced travel time, and shortened distances, they have also had negative environmental impacts, such as large-scale deforestation, the rise of environmentally unfriendly industries, and waste disposal that pollutes the environment. According to Seyyed Hossein Nasr, the root of the environmental crisis caused by science and technology lies in the misinterpretation of humanity.²

Currently, several studies addressing modern science and its implications have been conducted. Tanjung, highlights the importance of considering the impact of modern Western science on the environment from a theological perspective and emphasizes the need for a deeper understanding of the philosophical and spiritual dimensions of the current environmental crisis.³

Another study shows that modern Western science has some negative impacts on modern Islamic science. For instance, modern Western science has led to the secularization of Islamic science and marginalized Islamic values within science. The Islamic view of knowledge and spirituality differs significantly from that of modern Western science. The understanding of modern Western science tends not to link the relationship between God and the environment. As a further consequence of this secularization, Western society boldly claims that "God is dead".⁴ Modernism historically began during the Renaissance, characterized by the combination of rationalist and empirical epistemological schools. Notable figures from both sides include Descartes, Nicholas Malebranche, Gottfried Wilhelm Leibniz, Benedict Spinoza, Thomas Hobbes, John Locke, and David Hume. The combination of these two approaches was completed by Immanuel Kant. Modernism views humans and the universe as separated from their reality. Both are divided by a boundary defined by the terms subject and object.⁵

However, both articles focus only on one aspect of the impact of modern Western science, such as its impact on the environment or on Islamic values. To fill the gap in the discussion, this article aims to explore the broader impact of modern Western science from a theological perspective, examining its influence on humanity's perspective on faith in Islam and humanity's responsibility as stewards (khalifah) on Earth, ensuring no harm is done to the planet.

² Nasr, S. H. (2008). *Islam and the West : Science, Religion, and Civilization*. New York : HarperOne.

³ Tanjung, M. (2020). The Impact of Modern Western Science on the Environment from an Islamic Theological Perspective. *Jurnal Al-Bayan*. Vol. 21. No. 2. hal 315-328.

⁴ Tanjung, M. (2020). The Impact of Modern Western Science on the Environment from an Islamic Theological Perspective. *Jurnal Al-Bayan*. Vol. 21. No. 2. hal 13.

⁵ Rahman, A., & Amarulloh, U. (2019). The Influence of Modernism on the Islamic Epistemology : A Critical Analysis. *Jurnal Ilmiah Dinamika Islam*, Vol 18. No. 2. hal 61-74

METHOD

This study is a qualitative descriptive research using a library research or literature review approach. According to Habsy, a literature survey is a method used to collect data or sources relevant to the issue at hand.⁶ The data collection method employed in this research involves library surveys or literature studies, with data derived from literature, books, as well as national and international journals relevant to the subject matter. The data analysis technique used in this research follows the theory proposed by Miles and Huberman. According to Siskawati et al., the Miles and Huberman theory consists of stages of data reduction, data display, and drawing conclusions.⁷

RESULTS AND DISCUSSION

Science is generally defined as knowledge acquired in a systematic manner about the structure and behavior of all phenomena in the universe, including both natural and social phenomena. According to Ali Anwar, science can be briefly and simply defined as a body of human knowledge gathered through an empirical process that is accepted by reason. Handani states that science, derived from the term "natural science" or simply "science," usually refers to a group of related disciplines that include biology, physics, chemistry, geology, and astronomy, all of which aim to explain the phenomena occurring in nature.⁸ According to Webster's New World College Dictionary, as cited by Hamdani, science is a systematic knowledge derived from observation, study, and experimentation conducted to understand the principles of nature.

Seyyed Hossein Nasr describes the term "modern" as referring to the worldview and lifestyle of Western societies. "West" here implies a way of life that is rationalistic, capitalistic, secularistic, and tends to move away from religious perspectives. The West refers to the European world, which experienced the Renaissance in the 17th century. In Western history, this began with the scientific revolution in Italy, which then spread across Europe.

Modernity is technological and scientific progress. If managed well, this progress can have a significant impact, aiding efforts to promote the well-being and prosperity of Indonesian society. Nurcholish Madjid is considered a modernist thinker who believes that Islam should engage with modernist developments. He argues that Islam shouldn't be confined to matters of marriage, funerals, or mystical practices. Instead, he believes that

⁶ Nayla Ziva Salvia, F. P. (2022). Analisis Kemampuan Literasi Numerasi Peserta Didik ditinjau dari Kecamatan Matematika. *Seminar Nasional Pendidikan Matematika*, 351-360.

⁷ *Ibid.*

⁸ Hamdani. (2011). *Filsafat Sains*. Bandung: Pustaka Setia.

Islam is a religion that embraces humanity and is positive toward the development of science and technology. The Islam he refers to is open to social, national, and even global realities.⁹

Modern Western science, with its various discoveries and applications, has transformed human life in multiple ways. Technological advancements, such as computers, the internet, and advanced communication tools, have made accessing information and communication easier. In the healthcare sector, medical advances have saved countless lives and improved the quality of life. Modern industries have also produced various products and services to meet human needs. However, behind this rapid progress, there are also negative impacts that must be examined from an Islamic theological perspective. These negative impacts are not only related to environmental damage and the exploitation of natural resources but also touch upon the spiritual and faith aspects of human life.

Impact on faith

One of the negative impacts of modern Western science is the weakening of human faith in Allah SWT. This is due to several factors, including: 1) Secularism: Separating Religion and Science. Secularism, which separates religion and science, is one of the fundamental ideologies in modern Western science. This view holds that science should be studied and practiced objectively and free from religious influence. The negative impact of secularism is the emergence of a pragmatic and relativistic attitude toward truth. People tend to ignore the spiritual and transcendent dimensions in science, shifting their focus away from the greatness of Allah SWT in creating and managing the universe. 2) Materialism: Emphasizing Physical and Worldly Aspects. Materialism, which focuses on physical and worldly aspects, is another factor that weakens faith. This perspective believes that only things that can be measured, observed, and scientifically tested are considered real. The negative impact of materialism is the loss of spirituality and human connection with Allah SWT. People become obsessed with worldly matters and ignore the spiritual dimension in life. 3) Anthropocentrism: Placing Humans at the Center of the Universe. Anthropocentrism is a paradigm that views humans as the center of the universe's system. Human interests are considered the most decisive in ecosystem arrangements and in policies related to nature, whether directly or indirectly, with the highest value placed on humans and their interests.¹⁰ Only humans have value and are given attention, as long as they serve human interests. Thus, nature is seen merely as an object, tool, or means to fulfill human needs and interests. Nature is just a tool for achieving human goals, without intrinsic value of its own.¹¹ The anthropocentric paradigm is highly instrumental, understanding the relationship between

⁹ Nurcholish, Madjid. (2021). Islam dan Tantangan Modernitas Perspektif Nurcholish Madjid. *Jurnal Pemikiran Islam*. Vol. 1. No. 2. Hal. 178-189

¹⁰ A. Sonny Keraf. *Etika Lingkungan Hidup*. hal. 47.

¹¹ *Ibid.*, hal. 47

humans and nature as an instrumental one. Nature is viewed as a means to fulfill human interests. Even when people show concern for the environment, their aim is often to ensure that nature continues to provide for human needs.¹² Nature will be neglected when it can no longer provide everything humans need. Anthropocentrism, which places humans at the center of the universe, is also the ideology underpinning modern Western science. This perspective believes that humans have the right to exploit the universe to meet their needs. The negative impact of anthropocentrism is the emergence of selfish and exploitative attitudes toward nature. People forget their responsibility as stewards (khalifah) on Earth to maintain environmental sustainability and ecological balance.

These three factors, secularism, materialism, and anthropocentrism, create a scientific paradigm that ignores spiritual and transcendent dimensions. This can weaken human faith in Allah SWT and shift their focus from moral and spiritual values to material and worldly aspects.

Impact on Human Responsibility as Khalifah

Modern Western science has also impacted human responsibility as khalifah (stewards) on Earth. This can be attributed to several factors, including:

Exploitation of Nature: Neglecting the Responsibility of Khalifah.

One of the negative impacts of modern Western science is the excessive exploitation of natural resources. The use of technology without considering environmental impacts has led to significant environmental damage. Deforestation, air and water pollution, and the depletion of natural resources are clear examples of this exploitation. Additionally, the negative impacts of modern science extend to soil contamination. From an Islamic theological perspective, soil and land (Al-Ardh) are primary components and resources for the life of humans and other living beings. In this context, "soil" refers to the Earth's surface, its uppermost layer, or land. Any human actions that lead to soil and land degradation indicate a violation of God's infinite mercy and guardianship over nature. Conversely, maintaining soil from degradation, pollution, and contamination is a duty for every human being and a virtuous act that will be rewarded by Allah SWT. Therefore, it is crucial to keep our Earth pure and clean. On a broader scale, in field applications, one of the effects of modern science on the environment is industrialization. Industrialization is the process of economic development through the transformation of resources and increased energy consumption. While industrialization has driven economic growth, it has also resulted in environmental degradation due to the overuse of natural resources, high levels of pollution, and loss of biodiversity. These outcomes are contrary to the responsibility of humans as

¹² *Ibid.*, hal. 48

stewards of the Earth, which requires sustainability and the care of God's creation.¹³ Environmental damage due to industrial development continues to occur. Improper and poorly managed industrial waste disposal systems not only create pollution but also degrade the environment. Large-scale extraction of natural resources using advanced technology threatens the availability of these resources for future generations. Mass deforestation without considering its consequences leads to forest depletion, contributing to increased global temperatures. The green revolution in agriculture, with the use of pesticides, has both direct and indirect impacts on human health. It's long been known that pesticides can cause eye and skin irritation, respiratory issues, memory loss, and even cancer in the long term. Pregnant women consuming food and drink containing pesticide residues can risk giving birth to babies with congenital defects. The use of pesticides also creates a paradoxical situation, as excessive use can lead to pesticide-resistant pests and kill the natural enemies of those pests. Mining activities also result in numerous negative effects. Modern mining technology, while enabling resource extraction, often leads to environmental damage such as floods, droughts, barren soil, and erosion. Although development in our country is essential for the well-being of the Indonesian people, it should not come at the cost of significant environmental damage. Development is a process that integrates human resources, natural resources, and capital resources. However, in its implementation, efforts must be made to minimize negative impacts to avoid detrimental effects on the environment. The negative impacts of natural resource exploitation contradict Islamic principles regarding human responsibility as khalifah (stewards). Islam requires that humans preserve the environment and use natural resources wisely. Uncontrolled exploitation of nature is a violation of Allah SWT's trust and can lead to natural disasters and permanent environmental damage. Therefore, adhering to the principles of responsible stewardship and sustainable development is essential to mitigate these negative effects and align with Islamic teachings on caring for the Earth.

Oppression of Humans: Violating the Principle of Justice

The rapid advancement of technology has also been used by some parties to oppress and exploit other people. Advanced weaponry, mass surveillance systems, and sophisticated information technology have been utilized to control and suppress societies. The negative impact of this human oppression contradicts the principles of Islam regarding justice and equal rights. Islam teaches that all humans have equal rights and should not be subjected to cruelty or injustice. Using technology to oppress humans is a violation of human rights and contradicts fundamental human values. Islamic teachings emphasize fairness and justice in all aspects of life. The use of technology to subjugate or harm others undermines these values

¹³ Robert H. Laurer. *Perspektif tentang Perubahan Sosial*. Hal. 411.

and poses a threat to social harmony and human dignity. The exploitation of technology to restrict freedom, infringe on privacy, or suppress dissent not only contradicts Islamic ethics but also has broader societal repercussions. Therefore, it is crucial to address these negative impacts and ensure that technological advancements are used to promote justice, fairness, and respect for human rights, aligning with the principles of Islam.

Ketidakadilan Sosial: Memperparah Kesenjangan

The benefits of scientific and technological advancement are not enjoyed equally by everyone. Disparities in access to technology, information, and natural resources have led to worsening social inequalities. The elite and developed countries have easier access to technology and natural resources, while developing nations and poor communities lag far behind. This negative impact of social injustice contradicts Islamic principles of brotherhood and social welfare. Islam emphasizes the importance of equality and social justice. Social injustice resulting from modern science and technology can trigger social conflicts and widespread poverty. Islamic teachings advocate for the equitable distribution of wealth and resources, promoting a sense of unity and compassion among people. The growing technological divide, fueled by the unequal distribution of scientific progress, not only harms societal cohesion but also deepens economic disparities, creating barriers to social mobility. This situation can lead to social unrest and increased poverty, which stands in opposition to the Islamic principles of fairness and societal harmony. To tackle this issue, concerted efforts are needed to ensure that the benefits of science and technology are shared equitably. This involves promoting policies that bridge the technological divide and reduce social inequalities, ensuring that everyone has access to the tools and resources needed to improve their quality of life. By embracing the Islamic values of social justice, societies can work toward reducing social disparities and fostering a more inclusive and equitable world.

Seeking Solutions

The negative impacts of modern Western science on faith and human responsibility as khalifah (stewards) on Earth require comprehensive and sustainable solutions. Here are some potential steps that can be taken:

1. Developing an Islamic Science Paradigm: Integrating Knowledge and Religion. An Islamic science paradigm needs to be developed to integrate knowledge and religion, fostering a science that is moral and dignified. This paradigm should emphasize a balance between material progress and environmental sustainability, as well as the integration of spiritual and moral values in scientific research and application. The development of an Islamic science paradigm can be achieved through several steps:
 - a. Study of Islamic Theology and Philosophy: A deep examination of Islamic theology and philosophy can help scientists understand moral and spiritual principles that align with science. This step encourages researchers to incorporate

Islamic values into their scientific endeavors, promoting a holistic approach to knowledge.

- b. Dialogue Among Scientists: Dialogue and collaboration between Islamic and modern scientists can facilitate the exchange of ideas and thoughts, creating a more integrative science paradigm. These interactions can bridge cultural gaps and promote mutual understanding, leading to a science that embraces both religious and scientific principles.
- c. Islamic Science Education: Implementing a science curriculum that integrates Islamic values is essential for cultivating a new generation of scientists with moral and spiritual commitment. This educational approach should focus on scientific knowledge while emphasizing ethical conduct, environmental stewardship, and social responsibility.

By following these steps, an Islamic science paradigm can be developed that not only advances scientific knowledge but also adheres to ethical and spiritual values. This integrated approach helps ensure that scientific progress contributes to the well-being of society and the environment while respecting Islamic teachings and moral principles.

- 2. Strengthening Islamic Education: Instilling Moral and Spiritual Values. Islamic education must be strengthened to instill moral and spiritual values in people, including a sense of responsibility towards nature and fellow humans. This education should emphasize the importance of balancing material and spiritual progress and encourage the practice of Islamic values in everyday life. Efforts to strengthen Islamic education can be carried out through several measures:
 - a. Islamic Education Curriculum: The curriculum should be updated to include content on science and technology from an Islamic perspective, while emphasizing humanity's role as stewards of the Earth.
 - b. Development of Learning Methodologies: Innovative and engaging learning methodologies should be developed to boost students' interest and participation in studying Islam and science.
 - c. Empowering Teachers and Lecturers: Teachers and lecturers should be empowered through training and capacity-building programs to effectively teach science and technology from an Islamic perspective.
- 3. Raising Public Awareness: Education and Campaigns. Public awareness of the negative impacts of modern Western science needs to be increased through various education and campaign programs. These programs should reach a wide range of audiences, including students, college students, religious leaders, and the general public. Efforts to raise public awareness can be carried out through several steps:

- a. Seminars and Workshops: Seminars and workshops on science and technology from an Islamic perspective can be organized to enhance public knowledge and understanding.
- b. Media Campaigns: Mass media and social media campaigns can be used to spread information about the negative impacts of modern Western science and to encourage the adoption of more responsible scientific practices.
- c. Community Empowerment: Local communities should be empowered to engage in educational activities and campaigns that promote science and technology in harmony with Islamic values.

CONCLUSION AND RECOMMENDATIONS

Modern Western science, with all its advancements, has transformed many aspects of human life. However, beneath these advancements lie negative impacts that need to be examined from an Islamic theological perspective. These negative impacts include a weakening of faith, environmental degradation, exploitation of natural resources, and threats to humanity's responsibility as stewards of the Earth. Comprehensive and sustainable efforts are needed to address these negative effects, including the development of an Islamic science paradigm, strengthening Islamic education, and raising public awareness. By building a science paradigm that is balanced, moral, and dignified, and by reinforcing human awareness and responsibility as stewards of the Earth, we can harness the progress of modern science for the benefit and well-being of humanity, in line with Islamic theological values.

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