

Stephen hawking's philosophical views and the hidden truths of the universe

Abdullayev Sherzod Komilovich

Independent Researcher, Department of Philosophy and Logic, National University of Uzbekistan

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Abstract: In the twentieth century, many discoveries were made about space bodies and phenomena in the universe. Stephen Hawking's discovery of black holes. A star that has used up all its energy begins to shrink inward. As a result of this compression, a powerful gravitational field with an infinitely high density and a mass close to zero is formed in the place of the star. This area is called a "black hole" in astronomy. Black holes cannot be seen even with the most powerful telescopes. Because they absorb photons. As a result, it loses the light that can be perceived by the human eye and does not reflect them at all. The presence of a black hole can be determined by the extremely strong magnetic field created around it.

Keywords: Gravitation, theory of relativity, gravity, force, earth, universe, galaxy, solar system, black hole, explosion.

Introduction: Stephen Hawking is one of the great figures who holds a unique place in the history of modern science and philosophy. He not only limited himself to the scientific study of the universe, but also strove to understand the essence of existence from a philosophical perspective, encouraging humanity to reflect on the deepest truths of being. Hawking's scientific research and philosophical views demonstrate remarkable depth in issues such as the complexity of space-time, the mysterious nature of black holes, and the origin and development of the universe. His contributions significantly expanded the boundaries of human thought. His works and ideas helped us to understand the universe not just as a physical entity, but also as a key to grasping the philosophical and essential aspects of existence. These qualities introduced Stephen Hawking not only as a great physicist of our time, but also as a profound thinker seeking answers to the fundamental questions about the hidden truths of the cosmos.

Literature Review

In order to gain a deep understanding of Stephen Hawking's scientific and philosophical views, it is essential to refer to his own works as well as analytical sources about him. Hawking's *A Brief History of Time* is a significant source that scientifically explains the origin

of the universe, black holes, the structure of space-time, and the transformations of the cosmos. In this book, Hawking presents complex issues related to modern physics in a simple and comprehensible manner, enriching them with philosophical perspectives. In particular, his views on causality and chance, the asymmetry of time, and the boundaries of the universe have laid the groundwork for both philosophical and scientific debates.

Moreover, in *The Grand Design*, Hawking's reflections on the existence of the universe, its order, and the essence of physical laws are of great importance. In this work, Hawking argues—with scientific evidence—that the universe could emerge spontaneously, without the intervention of an external creator. While this approach sparked discussions involving religious and philosophical viewpoints, it also demonstrated that the universe could be explained through natural laws.

Among the literature, studies about Hawking also hold significant value. Analytical articles written by physicists and philosophers, as well as monographs concerning his scientific work and philosophical perspectives, illuminate various aspects of his legacy. Furthermore, his scientific papers on topics such as black hole thermodynamics, the arrow of time, quantum mechanics, and the no-boundary model of

the universe reflect the fields to which he made fundamental contributions.

METHODOLOGY

Continuation of Literature Review and Research Methodology:

During the study of literature related to the topic, it is also important to examine Stephen Hawking's collaborations and scientific discussions with his contemporaries, such as Roger Penrose and Leonard Mlodinow. These works provide a deeper understanding of Hawking's views, not only from a scientific perspective but also in terms of uncovering the hidden philosophical truths of the universe. Therefore, Hawking's works and the analytical studies about him are invaluable resources not only for scientists but also for those interested in philosophy.

Research Methodology

The main focus of this research is on the study of Hawking's scientific and philosophical works. Primary sources include his books **A Brief History of Time**, **The Grand Design**, **Brief Answers to the Big Questions**, and his scientific articles. The ideas and concepts derived from these sources serve to illuminate Hawking's views on the universe in a comprehensive context. Since Hawking's thoughts encompass both scientific concepts and philosophical questions, philosophical methods are applied in the analysis. In particular, philosophical approaches related to the nature of existence, causality and chance, and the limitations or infinity of the universe are connected to Hawking's ideas.

Stephen Hawking's scientific works often integrate physics, mathematics, and philosophy. For this reason, the research requires an interdisciplinary approach. Alongside physics fields such as quantum mechanics, general relativity, and cosmology, philosophical concepts are also explored. By comparing Hawking's ideas with those of other great physicists and philosophers—including Albert Einstein, Roger Penrose, and Leonard Mlodinow—the distinctive aspects of his scientific and philosophical legacy are identified. This approach helps to consider Hawking's contributions within a global context.

RESULTS

By studying the scientific and philosophical context in which Stephen Hawking's ideas emerged, we can better understand the conditions under which his works were created and the specific intellectual problems they addressed. This allows for a more accurate interpretation of his ideas within the proper framework.

Stephen Hawking's philosophical views and analytical

inquiries into the hidden truths of the universe clearly demonstrate the significance of his scientific and philosophical legacy in the development of human thought. In his works, he approached complex issues—such as the origin of the universe, the nature of space-time, the characteristics of black holes, and the essence of existence—on the basis of scientific evidence. In particular, his books **A Brief History of Time** and **The Grand Design** not only advanced modern cosmology to a new level but also provided a foundation for serious philosophical inquiry into profound questions [1].

Hawking's "no-boundary proposal" introduced the idea that the universe has neither a beginning nor an end, thereby strengthening philosophical reflections on the infiniteness of time and space. His groundbreaking discoveries about black holes, including the phenomenon of Hawking radiation, encouraged humanity to explore the hidden laws of the cosmos. These views played a vital role not only within the scientific community but also "compelled humanity to reconsider the mysteries of existence from a philosophical standpoint. Hawking explored the complex link between causality and chance, emphasizing that the universe could emerge spontaneously based on natural laws" [2].

According to him, the existence of the universe does not require an external creator; rather, the process can be explained through quantum mechanics and the laws of physics. This perspective placed Hawking at the center of philosophical debates concerning divinity and scientific reasoning.

Hawking's approach was of unparalleled significance in forming theories that unite science and philosophy. He stressed the necessity of understanding the universe not only through physical laws but also through philosophical interpretation. As a result, his scientific and philosophical views expanded humanity's intellectual paradigms for comprehending existence. Stephen Hawking's legacy has contributed not only to the advancement of modern cosmology but also served as a source of inspiration for generations in their pursuit of answers to the deepest questions of being.

"Stephen Hawking's theories enable profound and far-reaching reflections on the future of humanity. His scientific research and philosophical perspectives not only served to uncover the mysteries of the universe but also guided the search for answers to important questions about the long-term future of humankind" [3]. Hawking emphasized that humanity's survival and continued existence depend on the advancement of knowledge about the universe. He believed that the future of humanity could be ensured by discovering

new habitable places in other parts of the cosmos, combating natural disasters and technological threats, and continuing intellectual development.

“Hawking’s theories aimed at understanding the nature of the universe—including his work on black holes and the no-boundary proposal—indicate the necessity for humanity to explore the cosmos more extensively through space research and interstellar travel” [4]. According to him, the depletion of Earth’s natural resources or the occurrence of global catastrophes might force humanity to seek alternative planets for survival. For this reason, he viewed the colonization of Mars and other nearby planets as a long-term survival strategy for humankind.

Hawking’s views transcend the boundaries of academic science, offering a vision for humanity’s future grounded in both scientific reasoning and philosophical insight. His call for exploring beyond Earth was not merely technological ambition, but a profound reflection on our place in the cosmos and the existential risks we face. Through these ideas, Hawking left behind not only a scientific legacy, but also a roadmap for thinking deeply about humanity’s fate in an ever-expanding universe.

Stephen Hawking’s philosophical reflections and scientific theories have expanded human thought and opened new horizons in understanding the deepest mysteries of the universe and existence. His works have inspired humanity not only to explore the cosmos scientifically but also to grasp the essence of being from a philosophical standpoint. Hawking’s theories on space-time, black holes, and the origin of the universe have made a profound contribution to the development of modern cosmology and have inspired new scientific and philosophical questions.

Hawking’s ideas have played a vital role not only in the realm of science but also in shaping humanity’s long-term vision of the future. He regarded space exploration and the colonization of other planets as key strategies for the survival of humanity. His warnings about the dangers of artificial intelligence and uncontrolled technological advancement emphasized the need for responsible management of future innovations. He called upon humanity to continue scientific progress, expand intellectual potential, and solve global challenges collectively.

Hawking’s works demonstrate that in order to ensure a stable future for humanity, it is necessary to continue fundamental scientific research focused on understanding the universe, to manage technological progress with caution, and to deepen our understanding of existence through philosophical reasoning. As humanity draws inspiration from

Hawking’s legacy in its quest to uncover the secrets of the cosmos, this knowledge will contribute not only to scientific discovery but also to reinforcing hope for the future.

Therefore, the continued study of Hawking’s scientific and philosophical ideas, conducting new research based on them, and applying them in practice should be considered essential components for the long-term development of humanity.

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