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# **Explanation of Stephen Hawking's fallacy** of the Big Bang Theory and denial of the existence of God



Mikaeel Jamalpoor (corresponding author) Assistant Professor of philosophy, Payame Noor University, Iran. mkja1391@gmail.com Mir Mehdi Behboodi Tolon M.A. Student of theology, Payame Noor University, Iran. mehdi\_tolon@yahoo.com

## Abstract

Hawking emphasizes the big bang theory as a practical theory, thus answering the question of how the universe began. It has been emphasized by Stephan Hawking. He, according to this ideology has had various outcomes related to the concept of God and the beginning of existence. He believes that all of Universal Existence is comprised of Material, Energy, and Laws of Physics, eventually leading to the independence of a Metaphysical God's existence for creation of the universe. This logicalfallacy study is based on the hypothesis that the Big Bang theory cannot be positive about the existence or non-existence of God. The main issue is the possibility of replacing God in the big bang. Since Hawking's expression of such an argument is distorted by the fallacy of detailed composition or co-authorship, it lacks philosophical rationality from a philosophical point of view. The explanation of what Hawking's -with inconsistent differences- has expressed about this topic sheds light on the big bang being termed as the starting point of the creation of the universe cannot be convincing. This article seeks to explore the argument for the Big Bang theory to prove the non-existence of God and to apply rationality and the laws of logic to achieve the designated goal.

**Keywords:** Big Bang Theory, Stephan Hawking, Logical Fallacy, Start of Creation, Denial of the existence of God.

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#### Introduction

The history of science has signified the progress of human thought in conceptualizing its surroundings as well as explaining human steps in finding answers to fundamental questions related to time, how we were created, what and why we are. The commencement of existence as a preliminary and fundamental issue has always engaged the human mind. In a variety of sciences, humans have tried to find suitable answers by processing, analyzing, and researching questions in regards to this fundamental problem. Philosophers, have done so through pure reason and empirical scientists, through experimentation and repetition, have each conceived diverse theory. Consequently, such has added up to the science of the third millennium. In the experimental sciences, the Big Bang theory proposed by contemporary physicist Stephen Hawking attracted many eyes. He considered the big bang to be the absolute beginning of existence and the point of its creation. From Hawking's point of view, there is no need for God to create the universe - despite matter and the laws of physics. Based off his statements, "science" is responsible for what, why and how the universe was created; In this case, there will be no need for a creator outside of physics in a transcendental way. The existence and non-existence of both need to be proven, since only the justifiable can be the correct answer to the queries raised in the human mind to the problems of the universe and how it began. On the other hand, proof must be fundamentally based on rational and scientific criteria, as well as on logical equations, and free from fallacy, otherwise it would not be acceptable. Similarly, the observance of scientific methods in proving innovative theories is essential. Thus, the lack of scientific aspects would take the rational validity and acceptability of a theory in to question. However, since proving the existence or non-existence of God in the realm of rational arguments and, consequently, on the basis of logical reasoning, the observance of rational and fallacious criteria will be essential. Research on the big bang theory has already been conducted, some of which has been negated as well as some that has been empirically and rationally proven. That part of research that has been conducted based on experimental sciences cannot be considered as one of the backgrounds of this research due to thematic negation. However, research that is based on rational principles and deals with the nature of the Big Bang theory as well as the creation of the universe, will be included in the research background. A recent study in the framework, is the study of the Big Bang theory from the perspective of mathematical philosophy. Accordingly, the study of God, Hawking's critique for the use of unscientific and unproven presuppositions such as top-down cosmological theory, as well as the study of the model-dependent realism view and the critique of its contradictory results have been analyzed. (Zia Tawhidi, 2017; 109) However, the alteration of the main issue and the purpose of the mentioned research with what is dealt with in this article seems obvious. The processing of this paper is not based on mathematical philosophy - or new logic - but on formal logic and a fallacy within it.



The main issue in this position is the replacement of the big bang instead of God. It is assumed that the big bang cannot be positive about the existence or non-existence of God because the philosophical conception of the big bang theory is based on a logical fallacy in the position of proving the existence or non-existence of God. Consequently, questions such as; "Is Stephen Hawking's theory of the beginning of existence and the denial of God compatible with logic and reason? Can the Big Bang be the origin of the universe? "Tend to arise. An examination of the background of the subject shows that previously, the Big Bang theory has not been explored logically and or erroneously. Thus, this descriptive-analytical study based on documented and library research, takes a brief look at the category of knowledge and science, we will thus express the Big Bang theory and its logical analysis.

## 1. Wisdom, belief in God, disbelief in God

Vast research on the big bang theory has been conducted up until now, some of which have been negated and empirically proven, and some of which have been rationally acceptable. (Hossein Zadeh, 2020: 18, Chalmers, 2010: 6) The belief that the universe has a Creator is confirmed by the theists and is denied by the atheists. Theists by relying on Holy scripture believe that the creator of the universe is a single entity 1 (Quran, 4: 32, Bible, 2009: 407) In contrast, there have been many philosophers who have denied the existence of God and have been called atheists; some with rational reasoning (Copleston, 2009; 321) and some have insisted on their denial based on experimental sciences (Kimiaei Asadi, 2010: 32) However, amongst these people have been some that have voided their ideology and have joined the theists. (Flo, 2010: 35). In any case, some philosophers have proved the necessity of existence on the basis of rational arguments2. Which method is suitable to find out the existence or nonexistence of the Creator of the universe, or which of the sciences should be elected to reach the answer, is a question for which no definite answer can be found, because the knowledge or wisdom of the existence of a being which accommodates the description of necessary existence is proved. some consider it to be demonstrated by proof and some not through cause (Lammi and Anni). (Mahdavi Nejad, 2005: 36) Whilst in the definition of knowledge from a rational point of view, it is enough to a set of general true statements synchronized around the axis of the unit (Habibi, 2008: 32). In this sense, it is obvious that in the field of theology, the commonality of both definitions in unity is its subject; Therefore, regardless of whether the argument is descriptive through or not through proof (Lami and Anni) is present or incomplete the existence or non-existence of the Creator is the subject of science or knowledge in theology. On the other hand, it is noteworthy to deal with the creator being known or not. Some have described the creator of the universe as distinct (Davis, 2010: 26, Copleston, 2011: 361) and others are determined not to identify the creator of the universe (Copleston, 1387: 263) Similarly, the group that has denied the Creator of the universe is added. And from this point of view, they have explored the problem:





in this sense the use of rational propositions is indisputable, just as the scientists of the empirical sciences do not consider themselves detracted from the use of rational in their empirical conclusions.

# 2. Logic and Fallacy

Philosophy of theology or philosophical theology is a derivative of the intellectual sciences that deals with existence. (Dadbeh, 1389: 10.) Like any other science, philosophy requires a set of tools. Validating arguments and observing scientific methods in philosophical thinking is not possible without observing logical requirements. (Khansari, 2009: 15) Thus, logic is used as an effective tool to measure thinking and recognize reason from illusion. In other words, the science of logic is the criterion for validating argument and philosophy (Ajhai, 2012: 11). (Khansari, 1388: 310.) Argument in logic is conducted in two methods, "lami" and "Anni", meaning demonstration with and without cause, which is based on the causal relationship from whole to part and vice versa. Logicians consider the decisive Demonstration through the cause argument to be superior to the Demonstration not through the cause argument (Khansari, 2018: 189). On the other hand, what is vital in philosophical thinking is the avoidance of sophistry and logical fallacies. Falsehood in the word of logic refers to those three arguments that seem to be reasoned and flawless, but in reality, have formal or substantive forms (Al-Muzaffar, 1429 AH: 477.) False reasoning not only does not have the strength to prove or disprove something, but in fact is fundamentally unacceptable. Therefore, in order to accept or not to accept a logical argument, primarily: the elements of the argument must be organized according to the rules of logic. Secondly: it must be free of any fallacies. Fallacies are divided in to verbal fallacies and spiritual fallacies. Verbal fallacies themselves consist of six parts. The fallacy of detailed composition or co-authorship is a type of verbal fallacies (Al-Muzaffar, 1429 AH: 486) With this attribution, since it is possible to explain the Big Bang theory and its results by considering the recent fallacy and adapting it to the subject. A passing reference to it will not be empty.

## 2.1. Detailed composite fallacy or sharing the compilation

Any analogy that leads to a change in a particular situation is considered a rebuke. If the constituent material of that analogy is from the category of certainties, it is considered argumentative rebuke and if the constituent material of the analogy is known and certain, it is called polemical rebuke. Now, if the constituent materials of analogy are neither certain nor definite or if the analogical materials are certain or definite but the form of analogy does not conform to the rules of logical analogy, a fallacy has occurred (Al-Tusi, 1424 AH: 398). The fallacy in logic is that the narrator of the argument, whether intentionally or inadvertently, misleads the audience (Al-Muzaffar, 1429 AH: 476). The combination between the words of the analogy, intentionally or unintentionally, has been misunderstood (Al-Tusi, 1424 AH: 401).





A: Five is even and odd

B: Whatever is even and odd is even

- C: Five is even thus, this argument means that
- A: The number five is a combination of even and odd numbers.
- B: Any number that is even and odd at the same time is an even number.

C: The number five is even. 4

This method of validation and proof means that A is the number 5 and is a composition of odd and even numbers. B: Any number that is even and is single digit, is an even number. C: The number 5 is even (False result due to the event of a joint composition fallacy or co-authorship.)

#### 3. Modern, classical and astrophysics

#### **3.1. Classical Physics**

The study of physical facts, in today's world is scientifically agreed upon. It does not go back more than a few centuries. In the unlikely periods, intellectuals who were often philosophical in nature, within the realm of rational analysis, dealt with the physical reasoning of existence. Such theories are reflected in the history of philosophy. Aristotle's intellectual and philosophical analysis in dealing with tangible phenomena under the title of his philosophical worldview is a clear example (Aristotle, 2009: 25) However, physics, in the modern sense, in dealing with the behavior of matter and the interactions of its constituent parts, entered a new level in scientific methodology between 1600 and 1900 AD and allocated the name of classical physics. Classical physics in the scientific division, consisting three sub-disciplines with the titles; Classical mechanics, thermodynamics and electromagnetism (Benson, 1391: 3.) The laws of classical physics led to significant scientific progress and went as far as the presence of humans on the moon. The law of conservation of energy stating that energy is neither created nor destroyed but transformed from one type to another is also the result of classical physics (Zalpour, 1390: 120).

## **3.2. Modern Physics**

Physicists encountered certain phenomena in the early nineteenth century which they could not explain with the concepts and laws of classical physics. Thus, from the beginning of the twentieth century, new physics was formed, of which special relativity, quantum mechanics, and general relativity were introduced. Today, physicists can explain physical phenomena in terms of four types of forces or fundamental relations, including; Gravitational, electromagnetic, strong nuclei and weak nuclei explain (Benson, 1391: 2.)

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#### 3.3. Astrophysics

Astrophysics, is the blend of astronomy with physics. The Babylonians, three thousand years BC believed that the position and movement of celestial bodies affect human destiny. This signified the deep interaction between space and astrology. In scientific terms, astrophysics is the study of the physical properties and composition of celestial bodies, which is done using the laws and patterns of physics (Kabiri Manesh, 2009: 5.) In general, astronomy, which is the basis of the big bang theory, has passed three eras; Central earth, Galactic, and Universal (Degani, 2012: 3.) The continuous expansion of celestial bodies over time, which has been cited to prove the big bang (Kiani, 2009: 14) By utilizing mathematical metrics and the laws of Classical physics, Modern physics and astrophysics are proven. The following equation is Friedman-Robertson-Walker's metric (FRW) 5 which Hawking also considers to be in favor of the big bang) (Hawking, 2009: 77);

#### 4. Stephan Hawking's theory

The universe is expanding and the galaxies are constantly moving away from each other. This means that galaxies have been closer together in the past (Hawking, Stephen, and Lucy, 2018: 54; Coles, 2012: 141.) Stephen William Hawking, a contemporary physicist, was born on January 8, 1942, in Oxford, England. He received his Ph.D. in theoretical astronomy and cosmology from the University of Cambridge. At the age of 22 he acquired Lou Gehrig's disease, a neurodegenerative disease that ultimately caused him total body paralysis. (Hawking 2014: 16) Hawking emphasized the Big Bang theory based on his scientific research and the Friedmann-Robertson-Walker metric equation. He states; In the Hot Bang model, the universe is anticipated to be explicable based on the Friedman model, which dates back to the time of the Big Bang. According to him, in Friedman's model - since the universe is expanding - the temperature of matter and radiation in it decreases, thus the size of the universe in the big bang itself is zero, so it must have an infinite temperature. However, consequently to the Big Bang, the universe continues to expand and the temperature continuously decreases (Hawking, 2009: 75; Hawking, 2014: 78). Time, at the starting point, began with an enormous bang. According to this theory, the beginning of time and the origin of the universe was caused by the Big Bang some 13.8 to 15 billion years ago (Hawking 2017: 18, Hawking, 2020: 49 and 80, Kiani, 2009: 12.) He believed, one, the universe consists of the laws of physics and matter, two, by proving the expansion of the universe, the occurrence of the big bang at a very highdensity point is proven as the starting point of the universe, and three, the two positive prepositions above are the physical cause of the existence of the universe from "nothing" 6. With the Big Bang theory, he answers the question of how and when the universe came into being, and explains in his own words the dependency or independency for God to exist in the universe. However, in order to rationally critique





the Big Bang theory - insofar as it relates to the existence or non-existence of God - and to arrive at a logical conclusion, it is necessary to elaborate his view and examine it according to the laws of logic, as well as to explain the concept of God in his words.

# 5. Analyzing the Big Bang

## 5.1. The definition of God

To be able to critique the Big Bang theory in terms of its relation to the existence or non-existence of God, the Creator of the universe, it is first necessary to understand the concept of God in order to answer question of God. Since Stephen Hawking has used the term "God" in a variety of contexts on several occasions, it seems more necessary to explain this specific term. In general, the concept of "God" has been discussed in several ways; A: Some - which include the monotheistic religions of Islam, Christianity and Judaism - have introduced God as an indistinguishable - and immaterial - being who is the cause of the creation of the world and is single, transcendent, omnipotent and omniscient. (Patterson et al., 2010: 29, Ghadrdan Gharamolki, 2014: 83.) Others highlight the distinction of God. These people, who think that God's simplicity is wrong, attribute different characteristics to him. They believe that God is a person, not an absolutely abstract object. These people know God as distinct but without a body (Davis, 2011: 26, Soleimani Ardestani, 2020: 59. A) Others do not believe in the existence of a god outside of matter and the laws of nature. This group can be explained by two perspectives; The first view: they absolutely deny the existence of any god - whether material or metaphysical -(Naqibzadeh, 2011: 74) and the second opinion: nature and its laws replace the transcendental god and believe that God is the same laws governing nature and physics (Copleston vol. 4, 2009: 280.) In any case, given Hawking's theory of the big bang and Hawking's statement about God and the origin of the universe, criticism would not be possible without regards to what he has said.

## 5.2. Hawking's opinion in terms of God

Stephen Hawking uses a variety of terminology in regards to God in his work. He sometimes refers to an indistinguishable god - as stated in monotheistic religions - and with this view he processes the big bang and tries to replace it with the god of monotheistic religions. "If the plan for a world without borders is correct, we cannot talk about freedom of choice for the preliminary conditions," he said. Of course, God has still been free to choose the laws that govern the world ". (Hawking, 2014: 119) In another place he says "The assumption that the universe was created before the Big Bang is meaningless". (Hawking, 2017; 19) He says: "God can be defined as the embodiment of the laws of nature; But this is not what the majority considers God. Most, conceptualize a human being with whom one can have a personal relationship. When you look at the greatness of the universe and see how much human life happens





in it, it seems absurd". (Hawking, 2020: 47.) On the other hand, in some of his statements, he acknowledges the existence of God and says: "It can be imagined that God could have created the universe at any time in the past ... It can still be imagined that God had created the universe at the moment that the Big Bang, or even later, but pretended that a Big Bang had occurred "(Hawking, 2010: 21). Also, in response to the question why should the universe at the beginning of time -a period we consider the past- be in a state of high order? He adds: "The possible answer is that God had decided that the universe would be smooth and orderly at the beginning of the expansion phase ... the universe was God's action" (Hawking, 2017; 107) Elsewhere, on the other hand, he denies God and states: "Everyone is free to have their own opinion, and my opinion is that there is no God." No one created the world and no one is the guide of our destiny. This gives me a deep insight; There is probably no heaven and no life after death "(Hawking, 1399: 54). It is insufficient to prove or disprove the existence of God. On the other hand, the occurrence of a logical fallacy - in that area of the word of Hawking, who sees the Big Bang as the substitute for God as the Creator of the universe - is plausible, and the processing of its region undermines the validity of his argument.

## 5.3. Logical approach to the Big Bang

Hawking, like other physicists, considered the universe to be composed of matter and the physics laws and sought to find the law of "everything" or the law of M, knowing the differences between classical physics and quantum physics; A law that can respond to all physical events (Hawking, Stephen and Lucy, 2018: 218.) He believed that a law that is not everlasting, is not a law (Hawking, 2009; 85). He invokes the law of conservation of energy and considers the universe to be composed of matter, energy and space 7. According to him, the source of the universe is matter and energy. He states: The universe was created at the moment of the Big Bang (Hawking, 1389: 194). This means that in 13.8 to 15 billion years ago, the entire universe was in high-density particles with very high heat, similar to a sponge in a fist. Once shrunken, it is enclosed and compressed (Hawking, 2009: 85) and there was nothing outside this particle. Suddenly, with the event of the Big Bang, the universe begins at once (Hawking, 2020: 48). In explaining how creation began, he mentions matter and the laws of physics, while he does not address the "existence of the laws of physics" immediately before the Big Bang. To another he says; The universe began from the moment of the Big Bang and acknowledges: "Before the Big Bang, nothing existed" (Hawking, 2017: 19). Focusing on his comment, he considers the laws of physics to be "nothing" before the Big Bang. On the other hand, He considers the Big Bang a product of the laws of physics and a material object consisting of matter, energy, and space, however, in his theory he makes no reference to "how the constants of physics came into being." This is exactly the problem. This is where the fallacy of compound composition or coauthorship comes into play;





B: Whatever originates from matter and the laws of physics does not need God.

C: The creation of the universe does not need God.

In explaining this fallacy, it should be said;

A: The origin of existence is from matter and the origin of existence is from the laws of physics.

B: Whatever originates from matter and whatever originates from the laws of physics, does not need God. (Hawking acknowledges in this section that the universe - because it arose from matter in addition to the laws of physics - does not need God).

C: The origination of existence, since is the product of matter and the laws of physics thus doesn't need a God (In regards to the universe, he bases his opinion of the Big Bang, but firstly; it never talks about how the laws of physics came into being. Secondly; to conclude the desired result, expresses both the major and minor premise as separate - By combining and composing, he tries to induce the desired result, and thus, to express both as inseparable of the big bang and ultimately as the cause of the creation of the universe and ultimately the cause of the creation of the universe, and from this, he reaches a secondary conclusion, which is the lack of the need for a God or denial of God. Not only, according to him, the big bang is not the creator of the constants of physics. Similarly, he states, it is the big bang that has occurred according to the laws and constants of physics. Such form will be far and false (Ibn Sina, 1435 AH, 19.) Although Hawking in some cases raises the possibility of replacing the laws of physics with God (Hawking, 2020: 47), but never pays attention to how these laws came into being. According to him, "specific physical laws" are only specific laws (Hawking, 2010: 24) without explaining how they originated. According to what has been stated so far and according to the rational limitation, there are four aspects to the relation between "proving the existence or non-existence of God" and the "big bang phenomenon":

1. The Big Bang is positive in terms of the existence of God.

2. The Big Bang is Positive in terms of the absence of God.

3. The big bang is neither positive about the existence of God nor positive about the absence of God.

4. The big bang is both positive about the existence of God and positive about the absence of God.

The first option is incorrect because the universe, on the assumption of occurrence, is in a state that its creation must be proved by God, while all objections to the previous positive arguments - that God created matter - are on it. (Of course, since the subject of this article is to explain Hawking's argument based on the Big Bang argument for the non-existence of God, the details of the reasons for its non-existence to prove the existence of God are left to another article. However, the cases mentioned in this article will briefly refer to the other party's violation) The second option is not correct as stated in the previous sections. The fourth option is irrational.





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In the meantime, only the third option is reasonable and acceptable. It is noteworthy that physicists consider the causal relationship on the one hand to be specific to the time after the Big Bang and on the other hand to be specific to the world of classical physics - not the quantum world (Hawking, Stephen and Lucy, 2018: 189). The critique of the first part must be said; First: Lack of knowledge about what, how and why before the big bang is not a positive lack of causal relationship before the big bang. Second: According to the rules of classical, modern and quantum physics, as well as Hawking's theories about the big bang, it turns out that the laws of physics existed before the big bang - because according to Hawking - otherwise the big bang would never have happened (Hawking, 2020: 48) This - as mentioned - is a clear contradiction in his words because he, on the one hand believes that the laws of physics are "nothing" and on the other hand says that there was nothing before the Big Bang (Hawking, 2020: 48.) In the end, and in the analysis of the second part, we note in general terms: failure to discover the causal relationship or lack of knowledge about why the motion of subatomic particles changes in quantum physics, cannot be positive lack of causal relationship.

## Conclusion

Discussing the existence or non-existence of God has been one of the primary intellectual concerns of mankind. In the periods of history, God has been considered in the sense of a simple being, the Absolute Universe and the Creator of the universe, in the divine religions, also in the sense of a specific person without a body, as well as equal to the laws of nature, and has occupied the human mind. Contemporary theoretical physicist Stephen Hawking, with his conversion from classical physics to modern physics and quantum physics, emphasized the big bang theory as the cause of the universe. Since reason and the laws of logic are the basis for the acceptance or non-acceptance of any theory, a rational and logical explanation of the Big Bang theory is necessary in terms of the existence or non-existence of God. Although his theory has already been assessed in terms of mathematical philosophy, it has not been specifically processed by logical-fallacious analysis and in terms of fallacy including detailed composition or co-authorship. In addition, it should be noted that what has been researched before is merely a philosophical critique of the "denial" of the existence of God by the theory of the big bang. While the big bang theory seems to lack a positive aspect to the extent that confines it to Its non-validity as an argument for "denying" the existence of God itself would be a way beyond reason. In any case, a critique of Hawking's theory reveals the contradictions in his argument in detail and measures its rational validity. Hawking, in spite of his differing views on the concept of God and the origin of the universe, sees the big explosion - the Big Bang - as the cause of the universe and an alternative to the creator, God. By logically analyzing his argument, it becomes clear that the Big Bang theory does not have the necessary validity to prove the existence or non-existence of God; Thus, the basic hypothesis -





that the Big Bang cannot be positive of the existence or non-existence of God - is proved, and the answer to whether Stephen Hawking's theory is consistent with rational logic and whether the Big Bang theory can be the origin of the universe is Void.

#### Notes:

 God is the One who created the heavens and the earth and all that is between them in six days, then He is on the Throne; There is no intercessor for you except Him; Do you not take notice?
Note: Achik Ganch, 1378: pp. 61-98, Ibn Sina, 1383: pp. 5-24, Ibn Sina, 1435 AH: pp. 17-66. See: Nasr and Leaman 1996, 1: 239 – 243

3. With the development of new logic, the science of logic is divided into two categories; Formal logic and non-formal region branched out. Logicians and philosophers, in logic Formally 16 fallacies and in the new logic, they have counted about 70 fallacies. But, in essence and in general terms, fallacies to fallacies Formal - focused on formal logic - and linguistic and non-linguistic (or material) - on (non-formal logic) fallacies are divided. According to one of the 16 fallacies, the formal region has been codified.

4. See: Al-Muzaffar, 1429 AH: pp. 481-487

5. The Friedmann-Robertson-Walker metric equation is abbreviated FRW. The principle in modern cosmology is distribution of the space of matter in the universe of homogeneous existence is the same After him, Howard Robertson and Arthur Walker modified Friedman's mathematical model. The result of the efforts of these three, leads to the presentation of the equation. It was FRW that proved the constant material expansion of the universe and was scientifically accepted. The Big Bang Theory is also based on. The basis of the FRW equation is formed. However, the expanding universe must have started from a certain point; In Stephen Hawking's opinion, that starting point is the Big Bang.

6. Note: Hawking, 2017: pp. 9 - 40, Hawking, Stephen and Lucy, 1397, pp. 67 - 72, Hawking, 1399: 48, Hawking, 1393: 29, Hawking, 1388, pp. 75- 105

7. See: Hawking, 2020 pp. 48-52

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#### **References:**

- The Holy Quran
- The Gospel of Jesus Christ, (20009), translation; New Millennium, Tehran, Ilam Publications.(in Persian)
- Achik Gunch, Alb Sendan, (1999), "Study in the Comparative Ontology of Existence from the Perspective of Sadr al-Din Shirazi and Martin Heidegger", translation (in Persian)
- Mohammad Reza Jozi, First Edition, Tehran, Publications of the Institute of Islamic Studies, University of Tehran in collaboration with the International Institute of Thought and Civilization (in Persian)
- Aristotle, 1388, *Alavi works*, translation; Ismail Saadat, first edition, Tehran, Hermes Publications. (in Persian)
- Ajahi, Mohammad Ali, (2012), *Fundamentals of Logic*, 11th edition, Tehran, Samat Publications. (in Persian)
- Benson, Harris, (2012) Basic Physics 1, "translation; Mohammad Reza Bahari, sixth edition, Takhran, Payame Noor Publications. (in Persian)
- Pulse, Daniel, (2015) Seven theories about religion, translation; Mohammad Aziz Bakhtiari, fourth edition, Qom, Educational Institute Publications and Research of Imam Khomeini (RA). (in Persian)





- Peterson, Michael et al., (2010), "Religious Wisdom and Belief", translation; Ahmad Naraghi et al., Seventh edition, Tehran, Tarh no Publications. (in Persian)
- Javadi, Mohsen, (2016), "Theory of faith in the field of Quran and theology", first edition, Qom, Maaref Publishing Office. (in Persian)
- Chalmerz, Allen F., 1390 ",) What is science translation; Saeed Zibakalam, 12th edition, Tehran, Samat Publications. (in Persian)
- Habibi, Reza, (2008), Introduction to the Philosophy of Science, Second Edition, Qom, Imam Khomeini Educational and Research Institute Publications. (in Persian)
- Hosseinzadeh, Mohammad, 1399 *Epistemology*, 32nd edition, Qom, Imam Khomeini Educational and Research Institute Publications. (in Persian)
- Flo, Anthony, (1398) Wherever he takes our reason, translation; Seyed Hassan Hosseini, First Edition, Tehran, Humanities Research Institute Publications and cultural studies. (in Persian)
- Khansari, Mohammad, (2009), Formal logic, thirty-ninth edition, Tehran, Agah Publications. (in Persian)
- Khansari, Mohammad (1397) *A Brief Course of Formal Logic* 29th Edition, Tehran, University of Tehran Press. (in Persian)
- Dadbeh, Asghar, (2010) *Generalities of Philosophy*, sixth edition, Tehran, Payame Noor Publications. (in Persian)
- Degani, Meyer, (2012) Astronomy in simple language, translation; Mohammad Reza Khajehpour, First Edition, Tehran, Geographical Institute Publications and Geography Cartography. (in Persian)
- Davis, Brian, 1390 Introduction to the Philosophy of Religion, translation; Maliheh Saberi Najafabadi, Fourth Edition, Tehran, Samat Publishing.
- Russell, Bertrand, 1345, *The World I Know*, translation; Ruhollah Abbasi, third edition, Tehran, Amirkabir Publishing Institute. (in Persian)
- Zalpour, Abolghasem; Azadegan, Azizullah,(1390) Formulas and laws of physics, first edition, Tehran, Faeq Publications. (in Persian)
- Soleimani Ardakani, Abdolrahim, (1399), An Introduction to the Comparative Theology of Islam and Christianity, Fourth Edition, Qom, Taha Publications. (in Persian)
- Ghadrdan Gharamaleki, Mohammad Hassan, (2014),) *Answer to Kalami doubts*; Book One Theology, Fourth Edition, Tehran, Research Institute Publications Islamic culture and thought. (in Persian)

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