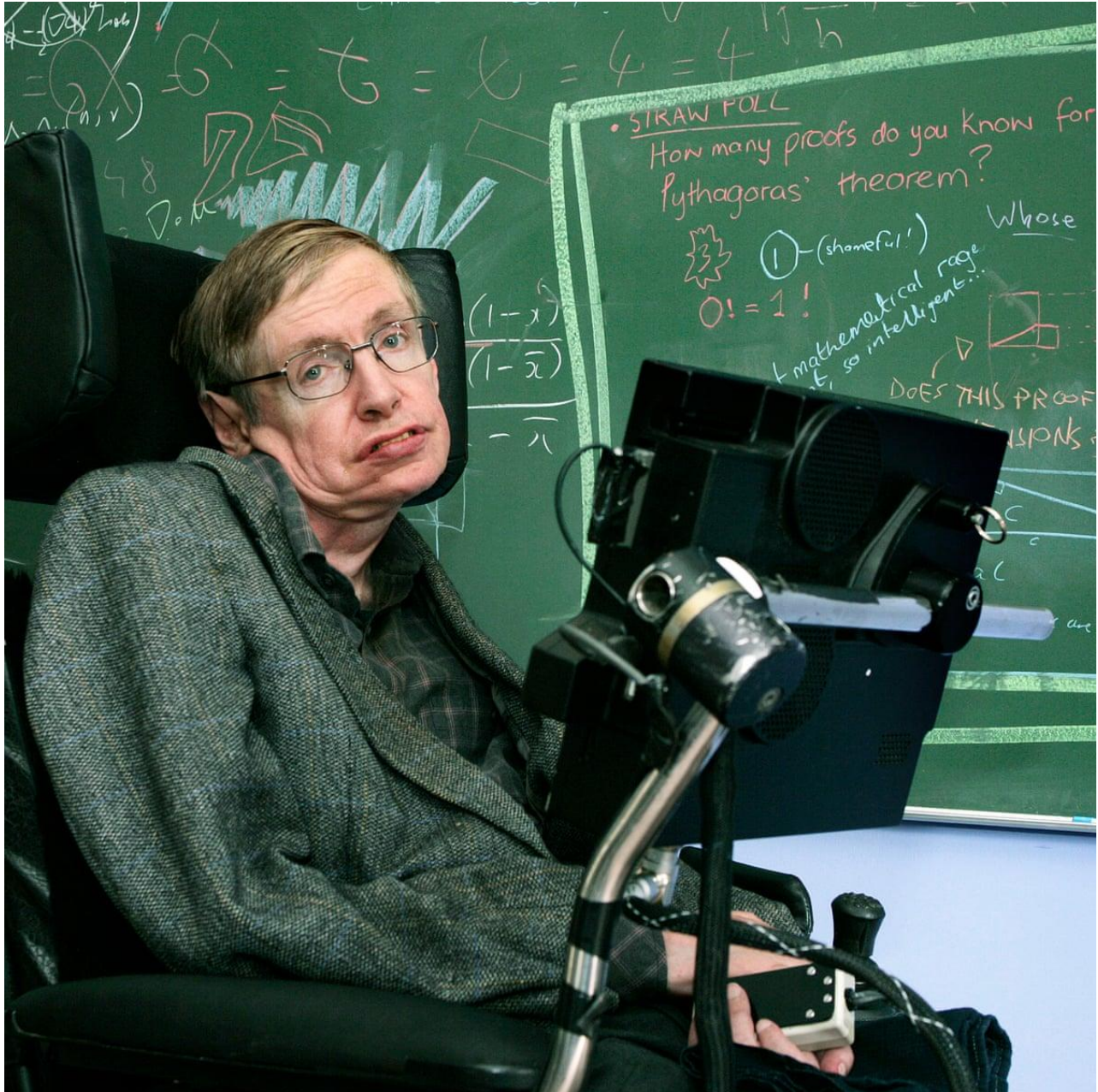


An Open Letter to Stephen Hawking



Dear Prof. Stephen Hawking,

I would like first to thank you for publishing your popular books; *A Brief History of Time* and *The Universe in a Nutshell*. I graduated as an engineer, but I have been fond of Astronomy, Cosmology and Theoretical Physics, and that is what led me to your books, which I really enjoyed and learned a lot from. You are widely

considered as the most brilliant theoretical physicist since Einstein, but I think you are also one of the greatest thinkers of our time, and a most persistent and courageous one.

My first issue is about whether the existence of God can be proven by physics, mathematics or by any branch of science. I personally find it more a matter of belief than of science. It would seem that God has let belief or disbelief in Him be quite easy and strictly a matter of our own choice, as dictated through our senses, feelings, consciousness, logic and reason. Scientific facts and discoveries may assist us in understanding His creation and in appreciating it, and in helping answer the quintessential question of Why?, but ultimately I don't think we can decide on His existence on the basis of scientific outcomes alone, irrespective of how solid they may appear at the time.

One of the reasons I was so interested in your books and admired them, was that they greatly helped me in writing a book entitled "Qur'anic Verses in the Light of Modern Science", (which I wrote in Arabic about twenty years ago), and I am now in the process of updating and translating it into English. My conclusion was similar to that of Dr. Maurice Bucaille in his book, *La Bible, Le Qur'an et La Science* (also translated into English), viz., the scientific aspects mentioned in the Qur'an, (also considered as the Last Testament by Muslims as it is seen as the last revelation from God) could have never been written by a human more than 14 centuries ago, as they are in complete agreement with our current knowledge and the latest achievements of modern science. As you know, the Qur'an we read today has not been changed since its revelation. Original manuscripts still exist, e.g., in Egypt and Turkey.

Thanks to what I learned from your books, I was able to understand several verses in the Qur'an that dealt with Cosmology and Physics. Allow me please to give you few examples: "Haven't those who disbelieve known that the Heavens and the Earth were joined together as one united piece, then We parted them?" (21.30)¹. If Heavens represent the background radiation/space and Earth the matter, then we could understand this in the light of the process of decoupling matter and radiation that took place about 300,000 years after the Big

¹ The Qur'an contains 114 Sura (Chapter) and each one has several verses. The first number gives the number of the Sura, and the second the number of the verse.

Bang. Another example: "With power did We construct the heaven, Verily We are able to extend the vastness of space thereof."(51.47). Can we understand this verse better than with the help of the notion of the expanding universe?

Among the questions you put forth in your book was "Why did the universe start out with nearly the critical rate of expansion that separates models that recollapse from those that go on expanding forever?" Let us now consider this verse, "Verily God grasps the heavens and the earth lest they should move away (disappear) from their places, and if they were to move away from their places (disappear), there is not one that could grasp (hold) them after Him. Truly, He is Ever Most Forbearing, Oft-Forgiving" (35.41). Even though the verse doesn't answer your question, we can understand it on the basis of the critical rate of recollapsing universe. One more example: "By the star which is falling (collapsing)"(53.1). Couldn't we understand this on the basis of the nova/ supernova?

I was also able to correct some translation errors made mainly because the translator was not familiar in Cosmology or Physics, e.g., *Al-Tarek* in verse 86.1 means the knocker/pulsar, but it was translated 'the night comer'. After correcting the translation it reads, "By the heaven and the knocker (pulsar), and what will make you to know what the knocker/pulsar is? It is the piercing star."(86.1-3). We can understand the verse by remembering the neutron star properties. Similarly, in verses 81.15 and 16, the translator thought that the verse deals with a planet, but it isn't so. The correct translation from Arabic should read, "So verily I swear by the disappearing star, the black sweeping one."(81.15-16). The disappearing, black sweeping stars would be best understood as the black hole. Finally, the word *Ruh* in Arabic has two meanings it means soul and it was also used to mean Angel Gabriel. In the following verse it should apply to our souls, "The angels and the soul ascend to Him in a day the measure whereof is fifty thousand years."(70.4). With the help of the theory of relativity we can understand that the angels and the souls are moving with a speed close to that of light, and that their single day equals fifty thousand years in our time span. As a matter of fact we can even calculate their speed!

Now I shall come to the second issue. From one side, you used the virtual time approach and showed that space and time may form a closed surface without boundaries. You added that “the universe wouldn’t have a beginning or an end. What place would there then be for a Creator”. All this was based on changing the imaginary time into real and the real time into imaginary. But what if we can’t do that? I remember watching on Finnish TV an interview of a professor of Theoretical Physics at the University of Helsinki about one of your books. After praising the book, he said, “..but he again brought up the issue of virtual time, and I don’t understand what on earth he meant with it!”. Hence, it may be safer to stick to the Big Bang theory in spite of its singularities in which we feel, so far, that we are lost.

As you and Penrose managed to apply the theory of relativity to the Universe and came to the conclusion that if the theory of relativity is correct, then the Universe should have a beginning, and you asked who would have initiated the start? You also said in your book, “So long as the universe had a beginning, we could assume it had a Creator.” That is Ok for me, but you also added that, “..most people have come to believe that God allows the universe to evolve according to a set of laws and doesn’t intervene in the universe to break these laws.” It might appear to us so far that this is the case, but does it necessarily mean that He can’t, when He so wishes, to intervene and change or even reverse these laws, given that He was the one who created them. According to the following verse, there is nothing that happens in heavens or on earth without his complete knowledge, “*And with Him are the keys of the *Ghaib* (all what is hidden/unseen/unknown), none knows them but He. And He knows whatever there is in the land and in the sea; not a leaf falls, but He knows it. There is not a grain in the darkness of the earth not anything fresh or dry, but is written in Clear Record*” (6.59).

On the other hand, in one of your recent TV programs, you mentioned that since space time started with the Big Bang, hence before it there was no concept of time, there was nothingness and God couldn’t exist. I wonder if I remember what you said correctly... What if God Himself created time when He created our Universe? If there was no concept of time, does it necessarily mean that there was nothing?.. May be there was eternity! Perhaps there were, or still are, other Universes. You may agree with me that this is beyond our current knowledge and our capacities. Simply because we wouldn’t be able to go through the background

radiation or to communicate with these Universes, not while we are in this Universe. Here comes the role of religions and beliefs.

What I have noticed particularly from the old paradox you gave; 'can God make a stone so heavy that He can't carry', that we generally don't comprehend the power of the Creator. Here I have to come back to the Last Testament which tells us a story that happened when Moses went to meet his Lord to get the Ten Commandments: "And when Moses came at the time and place appointed by Us, and his Lord spoke to him; he said:'O my Lord show me Yourself, that I may look upon You'. God said: "You cannot see Me, but look upon the mountain; if it stands still in its place you shall see Me.' So when his Lord appeared to the mountain, He made it collapse to dust, and Moses fell down unconscious. Then when he recovered his senses he said: 'Glory be to You, I turn to You in repentance and I am the first of the believers.'"(7.143). Could this be an answer to the paradox? This was emphasized in other verses, "They made not a just estimate of God such as due to Him. And on the Day of Resurrection the whole of the earth will be grasped by His Hand and heavens will be rolled up in His Right Hand. Glorified be He, and High be He above all that they associate as partners with Him."(39.67). Similar description of the Day of Resurrection was given somewhere else. "And (remember) the day when We shall roll up the heaven like a scroll tolled up for books. As we began the first creation, We shall repeat it. (It is) a promise binding Us. Truly We shall do it."(21.104).

Finally, I would like to say that both of us have been traveling along the time axis for over seventy years. Knowing that one's trip may end at any time, what thereafter would happen? Personally, I am trying to prepare myself for that day, and to ask Him answers to the questions we are disputing about!

I would be delighted to hear on your views about any of these issues. Once more thank you for your wonderful books and I am wishing you all the best.

Yours truly,



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