

Essay

## Evidence of God in Modern Physics

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### ABSTRACT

This is a collection of my latest essays on the evidence of God in modern physics. In this collection, I shall discuss: (1) Where Should One Seek Evidence for the Existence of God? (2) Quantum Physics and Spaceless Universe; (3) All-pervading God and Quantum Mechanical Worldview; (4) Logical Mind and the Question of God; and (5) Why Do Atheists Complain that There Is No Evidence for God?

**Key Words:** evidence of God, science, spaceless, timeless, relativiry, quantum mechanics, quantum entanglement.

### 1. Where Should One Seek Evidence for the Existence of God?

Is light placed within space and time? Or, are space and time placed within light? Our common sense will say that the first statement is true, that is, light is placed within space and time. Anything or anyone placed within space and time cannot have any lack of them if not artificially deprived of them. I do not know how anyone or anything can be artificially deprived of time, but I can describe how someone or something can be deprived of space. When a prisoner is put inside a prison cell, he is not fully deprived of space, because there will still be some space left within the four walls of the prison cell. Now let us suppose that instead of putting the prisoner inside a prison cell we put him inside a cage all the three sides of which are adjustable. That is, we can reduce the length, breadth and height of the cage, and we reduce all the three sides of the cage in such a way that ultimately the prisoner fails to make any movement lengthwise, breadthwise as well as from bottom to top. In such a situation we can say that we have artificially made the prisoner spaceless. So the general truth is that anyone or anything placed within space and time cannot have any lack of space and time if not artificially deprived of them. Or we can say that anyone or anything placed within space and time cannot *naturally* have any lack of space and time. As like everyone and everything else light is also placed within space and time, so the above statement will be true for light also. That is, light being placed within space and time cannot *naturally* have any lack of them. In the last sentence the word "naturally" is most important.

But in the real world we find that light being placed within space and time and not being in any artificial way deprived of them still lacks both space and time. It does not have any space to move, and it does not have any time to move. As per relativity theory for light any distance it has to travel is for some unknown reason mysteriously reduced to zero, and ultimately it is left with no distance to travel. In case light has to travel an infinite distance, then also it will fail to make any movement, because as per relativity theory again that infinite distance will simply be

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contracted to zero, and thus light will again have no distance left that it will have to travel. As if some outside agent does not want that light ever makes any movement. That is why it always sees that whenever any occasion arises that light has to travel some distance, in each and every occasion, and without any exception, that distance is contracted in such a way that ultimately light is left with no distance to travel.

Whatever I have written in the last paragraph about distance is also true about time. As per relativity theory again light does not have any time to travel. As if that outside agent does not want to give light any time to make any movement. Let us suppose that light has to travel an infinite distance. Our common sense says that with its speed of 300,000 km/sec light will take an eternity to travel that distance. But that outside agent will again play such trick that this eternity will simply be reduced to zero time for light so that ultimately it will be left with no time to make any movement.

So long as relativity theory will remain true, whatever I have written in the last two paragraphs will also remain true.

Now what I want to say is this: These two very peculiar and exceptional properties of light, i.e., light being placed within space and time, and not in any way being artificially deprived of them, but still showing as if it has no space and time to make any movement, cannot naturally arise in light. Yes, I am again repeating this: these two properties of light cannot *naturally* arise in it. If scientists can explain how these two properties of light have arisen in it without invoking any kind of god, then of course there is no God. But if they fail to do so, then we will have to think otherwise.

## 2. Quantum Physics and Spaceless Universe

Here is one more confirmation from science that at its deeper level universe is spaceless. In their book “The Grand Design” Hawking and Mlodinow have written at one place (page 116) that as per quantum physics nothing is ever located at a definite point because if it were, the uncertainty in momentum would have to be infinite. They have also written that as per quantum physics, each particle has some probability of being found anywhere in the universe. If each particle has some probability of being found anywhere in the universe, then we will say that this is possible if, and only if, universe is spaceless. In a spaceless universe being present at any point of the universe is equivalent to being present at every point, that is, being present everywhere. If at quantum level each particle is present everywhere in the universe, then each particle will have some probability of being found anywhere in the universe. Phenomenon of quantum entanglement has already shown that universe will have to be spaceless at its deeper level, as otherwise we will fail to explain as to how two particles remain entangled even if they are separated by a long distance after their interaction. Here uncertainty principle of quantum mechanics also indicates that at its deeper level universe is spaceless.

If universe is spaceless, then it is timeless also. If distance between A and B is one light-year, then light will take one year for covering the distance AB. But if this distance is reduced to zero,

then time taken by light will also be reduced to zero. So, if the universe is spaceless at its deeper level, then it is timeless also.

Therefore our question to the scientific community will be this: How does the universe remain spaceless and timeless at its deeper level? Here we are not offering our explanation that it is due to the existence of a spaceless and timeless God. Rather we are expecting that they will offer their own explanation that will be non-theistic.

### **3. All-pervading God and Quantum Mechanical Worldview**

We say God is everywhere. God is everywhere means God is wholly present, fully present and entirely present at each and every point of this universe. As according to our worldview God is the source from which everything has originated, so from above we can conclude that at the deepest level of our universe, or at the quantum level, total substance of the entire universe is wholly present, fully present and entirely present at each and every point of this universe. So we are not at all astonished when we come to know that an electron does not have any definite position before any observation is made. It may be anywhere, and it may even be at the other end of the universe. Only when an observation is made on it to know its position, then only it takes a definite position. This quantum mechanical view is fully consistent with our belief in a God who is all-pervading. God being all-pervading every point of space is wholly identical with every other point of space at quantum level, and there is no way to distinguish one point from another point.

So we can say that at quantum level everything is simultaneously everywhere. So before any decoherence takes place (electron being observed) electron being here or being at the other end of the universe is quite immaterial, it is all the same. If we accept this view as true, then we can show that this can very easily explain the bizarre result of double-slit experiment when only one electron is fired at a time keeping both the slits open. As only one electron is fired at a time, so it is expected that it will pass through either one of the slits, and that as a result there will be no interference pattern when many electrons have been fired one after another. But in actual experiment interference pattern still appears which means that the electron has passed through both the slits.

But as per our worldview at quantum level everything is simultaneously everywhere, and so when only one slit will be kept open electrons will pass through that slit only. But when both the slits are open, they will pass through both the slits, and thus there will be interference pattern. So here we need not have to assume that when the electron goes from one point to another point, it does not follow any definite path, but rather takes all the possible paths simultaneously. According to Feynman “the particles take paths that go through only one slit or the other; paths that thread through the first slit, back out through the second slit, and then through the first again; paths that visit the restaurant that serves that great curried shrimp, and then circle Jupiter a few times before heading home; even paths that goes across the universe and back”. (Hawking and Mlodinow) All these assumptions are quite unnecessary if we accept the view that at quantum

level the universe is spaceless and timeless, and that as a result everything is simultaneously everywhere.

#### **4. Logical Mind and the Question of God**

A person may be a theist, or an agnostic, or an atheist. But whatever he may be, he should always be logical in his arguments. This is the minimum demand that we expect each and every sane person on earth will fulfill.

Now it may be true that there is a God, or it may not be true. But one thing is certain about this matter, that this God-question is not yet settled. If scientists can show that everything in this universe, including its origin also, can be explained without invoking any kind of God, then of course we the God-believers will have no other option but to admit that there is no God. As that day has not yet arrived, so my opinion is that this God-question should be kept open, and that we should also be open-minded on this issue. In a review of the book "Who Made God?" by Edgar Andrews atheistic scientist Victor J. Stenger has written in one place that any one who has read any of his books knows he would never say that models detect anything. Rather he simply says that God is not needed as part of any existing models but makes it very clear that, if the evidence should require it, science should be ready to include supernatural causes. He has also written that, unlike most scientists, he allows for the possibility that scientists may not always be able to explain everything purely naturally. Currently they can, but he cannot predict the future. Here he very clearly says that, unlike other scientists, he allows for the possibility that scientists may not always be able to explain everything purely naturally, and that if the evidence should require it, science should be ready to include supernatural causes. This type of attitude is most welcome, because it is a sign of healthy open-mindedness, and because we can argue with open-minded people freely.

Now it is easy to say that there is a God, but it is not so easy to prescribe a method by means of which existence of that God can be detected. Atheists generally complain that even if there is a God, there is no way of knowing it, because God-hypothesis is not testable. But I have shown in one of my earlier writings ("Some Reflections on God and Science") that this is not true, that there are some predictions that can be made from this hypothesis about the external world, and that those predictions can be either verified or falsified by scientific method. If all these predictions are falsified by science, then our conclusion will be that God-hypothesis is not worth any merit, and that we should downright reject it. But if we find that instead of falsifying them science is confirming them as true one after another, then what will we have to conclude from this? That God-hypothesis is nonetheless a worthless hypothesis? And the reality is that instead of falsifying those predictions science is confirming them as true one after another. I have shown it earlier in my first article, and I have shown it again in my article "One more proof that there is a God". In my first article I have shown that at least five predictions can be made from God-hypothesis that are as follows:

a) Space and time must be relative;

- b) Time must have to be unreal by some means or other;
- c) Immortality must be found to be written somewhere, in some scientific theory or law or equation;
- d) Volume of the entire universe must be found to be zero; and
- e) Everything in this universe must be ultimately reducible to one thing.

Out of these five first three of them have already been found to be true. Recently I find that one more prediction can also be made from this hypothesis:

- f) Distance from any point of space to every other point of space will be zero.

This prediction is also found to be true by the phenomenon of quantum entanglement. So what will the logical mind of atheists and agnostics say here? That God-hypothesis should always be rejected, whatever the circumstances may be?

## 5. Why Do Atheists Complain that There Is No Evidence for God?

Many theists believe that God is good. If there is any evil on earth, then that is solely due to man's disobedience of God, and not due to any shortcomings of Him. He is perfectly good. In the statement "God is good" atheists have found a ready weapon with which they can easily defeat their opponents. Actually what procedure have they followed here? It is this: first they have found out what predictions can be made about the universe from the above statement without violating any rule of logic. Then they have checked whether these predictions are supported by evidence or not. As they have found that these are not supported by evidence, so they have concluded that there is no God. In a universe created by a perfectly good God there cannot be so much evil and suffering that we find on earth. So they cannot be fully blamed if they come to such a conclusion that God does not exist.

[Although the following discussion is not relevant to the main theme of this article, still I will have to say something about this problem of evil. In an earlier article of mine I have shown that a good God is not fully free, because He is always bound to create others in order to doing good to them. A God who cannot do any good to others cannot be called really good. Similarly it has been shown that neither an evil God is fully free. A God who is fully free is neither good nor evil; He is beyond good and evil. I think there will be found not a single theist on earth who will dare to say that his God is not fully free. Therefore one day he will also have to admit that a fully free God is neither good nor evil. A universe created by a God who is neither good nor evil will also bear the traits of its creator; it will also be neither good nor evil. I think this will solve the problem of evil on earth once for all. From this we can make one more point: by simply showing that there is so much evil on earth, non-existence of God cannot be so easily established.]

Now we will be back to our main theme: why atheists do think that there is no evidence for God. It may be the case that there is really no evidence. Or, it may be that there is, but atheists do not pay any heed to them. I will show here that the second statement is true, not the first one. For

doing this I will follow the same path that atheists have followed. From a simple statement of theists that God is good they have concluded that God does not exist. Now we will find out what other statements have been made about this God, and we will also see what conclusions can be drawn about the universe from those statements about God. The statements that we will choose here are those that are made by mystics, and not by theists. For this we will give two reasons. First of all, mystics claim that they have direct encounter with God, whereas theists cannot make any such claim. Secondly, there is unanimity among mystics, and this is even recognized by atheists also. As a proof of this unanimity among mystics I will quote here only one line from philosopher Richard M Gale: "Mystical propositions claim that space, time and multiplicity are unreal; whereas propositions describing non-mystical experiences deny this." (Book: *The Religious significance of Atheism* by Alasdair Macintyre and Paul Ricoeur, Ch: *Mysticism and Philosophy*, Page 307, Columbia 1970) So from this it appears that there is unanimity among mystics, because we see that it is a general characteristic of all mystical propositions that they claim the same thing about space, time and multiplicity, the claim being that they are not real.

Another reason for not taking into consideration theistic statements about God is that in most of the cases they are not true. I have already shown that God's goodness conflicts with His freedom. If God is good, then He is not fully free. Again, if God is fully free, then He cannot be good. Similarly it can be shown that various attributes assigned to Him by theists do not go well with His oneness. One example may be cited here. Let us say that God is love. But if He is one, then before creation whom did He love? So if God is love, then that will imply that there is at least one being co-eternal with God, and in that case God's oneness will be gone for ever. God is one means there was no one else other than God at the beginning. Some Christian theists claim that there will be no such problem in their case, because their God is Trinitarian. So before creation there will be the reciprocal love of the Persons of the Trinity. So Father loved Son, Son in turn loved Holy Ghost and Holy Ghost in turn loved Father. But this does not solve all the problems, because God is not only love, He is merciful, just etc. If God is merciful, then before creation to whom was He merciful? Perhaps the reply will be that Father was merciful to Son, Son in turn was merciful to Holy Ghost and Holy Ghost was in turn merciful to Father. But the question is: why will Father have to be merciful to Son? Was there any possibility for Son to commit any sin, and so, Father would have a provision for mercy also for his only begotten Son? Similarly it can be asked: why will Holy Ghost have to be merciful to Father? In this case, was there any possibility for Father to commit any sin? Thus we see that even the idea of a Trinitarian God cannot solve all the problems.

So far we have come to know that mystics' God is spaceless, timeless and one. It has also been said about this God that He is changeless, immortal, all-pervading, eternal, unborn, uncreated, etc. Now there are some attributes of God from which nothing can be predicted about the universe, whereas there are some other attributes from which some significant predictions can be made. If we say that God is unborn and uncreated, then from these no prediction can be made, but if we say that God is one, then at least one prediction can be made, and it is this: everything in this universe will be ultimately reducible to one thing. This is because we say that God is the source from which everything has originated, and therefore whatever fundamental forces and particles are there in the universe will be ultimately found to have originated from one substance only, whatever that substance may be.

There are at least four more attributes of God from which such predictions can be made, and they are the following: His spacelessness, timelessness, immortality and omnipresence. From these four attributes at least five more predictions can be made, and I have already mentioned them in Section 4 of this essay in 4a), 4b), 4c), 4d) and 4f). Here I will only give the reasons why these predictions can be made:

- 1) For 4a) the reason is that God is spaceless and timeless, that is, for God space and time are unreal whereas for us human beings they are very much real;
- 2) For 4b) the reason is that God is timeless;
- 3) For 4c) the reason is that God is immortal;
- 4) For 4d) the reason is that God is spaceless and all-pervading at the same time; and
- 5) For 4f) the reason is the same as 4d).

These points have already been discussed in my article “Some Reflections on God and Modern Science”. It is only a repetition here. The only difference is that in the earlier article I have written that in total five predictions can be made from God-hypothesis. But now as I find that one more prediction can also be made, so we will say that God-hypothesis can make six predictions about the universe.

So, in total six predictions can be made, out of which four are already found to be correct. Science has shown that space and time are indeed relative; it has shown that at light speed time becomes unreal; it has shown that it is possible for a being having zero rest-mass to be immortal; phenomenon of quantum entanglement has shown that distance from any point of space to each and every other point of space is indeed zero. I will now show that one more prediction has also been found to be correct. It is that volume of the entire universe is indeed zero.

In Section 2 of this essay I have already shown that if what Hawking and Mlodinow have written in their book “The Grand Design” (page116) is scientifically correct, then from this we can conclude that universe is spaceless at its deepest layer. They have written that as per quantum physics each particle has some probability of being found anywhere in the universe. But, if the particle is everywhere in the universe, then only it may have some probability of being found anywhere in the universe. But a single particle can be everywhere in the universe if, and only if, universe is spaceless at its bottommost layer. In a spaceless universe there will be no space at all between any two points of space arbitrarily chosen, and thus in such a universe being present at any point of space will be equivalent to being present at each and every point of space, that is, being present everywhere. But a spaceless universe is a zero-volume universe. Thus quantum physics shows that total volume of the universe is zero.

However one point should be made very clear here. As they have used the language “anywhere in the universe”, so we have also used the language “everywhere in the universe”. But if they think that the language used by them is inappropriate here, and that some other appropriate language will have to be used in its place, then we will also have to change our language

accordingly. In such a case that the volume of the entire universe is indeed zero cannot be shown in this way. That is all.

Now only one prediction still remains to be validated: everything in this universe will be found to be ultimately reducible to one thing. That is, everything in this universe has originated from one substance only, and not from two or more substances. Although string theory is not a scientific theory because it cannot make any prediction that is testable, and thus there is no way to know whether as a theory it is true or false, still it has shown that all the fundamental forces and particles of nature can be seen as different vibrations of the same string. Thus we can say that it has united all the fundamental forces and particles of nature. On the basis of this we can hope that in future scientists will be able to develop a new theory that will show the same thing, and that will also be testable. When that day will come, all the predictions of God-hypothesis will come true.

Now let us admit that as a hypothesis God-hypothesis is a bogus one. Then the question that will definitely arise is this: how can a bogus hypothesis make so many accurate predictions about the universe? What answer will the atheists and the atheistic scientists give to this question? According to them, what is the definition of a good hypothesis? Its correct predictive power, or something else?