

**CAUSALITY BROKEN  
SYNTHESIZING RELIGION, PHILOSOPHY AND  
MODERN PHYSICS, CONFIRMING  
AL-GHAZĀLĪ'S WIN IN THE DEBATE OF THE  
WORLD'S PRE-ETERNITY BY  
PROVING DELAY IN EFFECT**

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The central issue of Imām Al-Ghazālī's book 'the incoherence of philosophers' (*Tahāfut al-Falāsifah*) concerning the world's pre-eternity rotates around the cause and effect. According to philosophers once all necessary condition for a cause are fulfilled, its effect cannot be delayed by necessity. On the contrary, according to Islamic theologians, it is not necessary. After 800 years, creation unveiled mysteries in its form, which both the parties (Philosophers and theologians) did not know. However, who won the debate over world's pre-eternity is still undecided. This paper will try to fill that gap by providing a new proposal which synthesizes Religion, Philosophy and modern science by proving that Imām al-Ghazālī's proposition was correct: i.e., The delay in effect in presence of a cause is possible. It will be established using these three different domains of universe supporting each other. Discussion on modern science will provide new insights on some of the core results of scientific theories, which have not been considered yet.

**Keywords:** Pre-eternity, Cause and effect, Metaphysics, Islamic theology, Al-Ghazālī, Islamic philosophy, Quantum physics.

### **Introduction**

In the history of Islamic philosophy no book made such huge impact on Islamic theology (*'ilmulkālam*) and philosophy (*falāsifah*), as the book

‘Incoherence of philosophers’ (*Tahāfut al-Falāsifah*)<sup>1</sup> written by Hujjatul Islam Abū Ḥāmid Muḥammad Al-Ghazālī during 1095 A.D. Al-Ghazālī explained in the religious preface of this book the reason for his lengthy book, refuting twenty central doctrines of philosophers. He says:

“I have seen people thinking distinct from religious companion (Muslim theologians) by virtue of intelligence and rejected very Islamic belief. The change in philosopher’s mentality is due to their hearing if names like Socrates, Plato and followers who misunderstood them. Due to philosophy and logical explanation of these great names, philosophers have given their intelligence and adopted the view which is against the Islamic doctrine.”<sup>2</sup>

Philosophers provide different lines of proofs for the world’s pre-eternity, but this article is concerned only with the central issue:

- a) World cannot be created from nothingness, hence temporal creation is impossible in time.
- b) Once cause is present, fulfilling all the condition, it has to produce an effect. Delay in effect is impossible.
- c) Cause and effect are simultaneous in time. The priority of cause over effect is in essence and rank not in time.
- d) God as a cause by necessity creates, and if God is eternal and changeless, so is the world.

The article will delve into detail on these questions avoiding arguments already presented by Al-Ghazālī. Questions will be analysed based on philosophers’ own doctrine concerning the world and ultimate reality. In previous centuries the world has revealed to us some of the most bizarre nature underlying the substances. The article will use the frontier of scientific knowledge at present to gather the proofs against philosophers’ proposal. The article will trace the arguments to original Greek sources wherever necessary and elaborate the views of science in detail.

First of all, it is important to describe major work related to topic. Marmura<sup>3</sup> has discussed this conflict over pre-eternity in detail with the inclusion of Ibn Rushd’s arguments, making it more valuable. He only tackled the issue within the realm of both parties’ arguments and then to

conclude, who was more logical and that was Al-Ghazālī. Marmura<sup>4</sup> again attempted to analyse the second proof based on Time for worlds Pre-eternity. After analysis he concluded that the proof of philosophers from time is *disjunctive syllogism* and does not prove world to be eternal. The central metaphysical issue is not the nature of time rather nature of God's causality. Edward<sup>5</sup> analysed the position of Al-Ghazālī on the second proof of philosophers on world pre-eternity, that world is posterior to God and God is prior to world, means only in essence God is prior to world not in time. It is clear that al-Ghazālī was not a supporter of this idea and rejected it, but he concludes that this proof of philosophers itself was incoherent. Rizvi<sup>6</sup> came with the study of an Isfahan thinker Mīr Dāmād, on the same issue, who tried to settle the dispute between both the parties by developing a *perpetual incipience* which can voluntarily act to cosmos at the same time knowing cause of cosmos. He is solely responsible for bringing existence into it. Goodman<sup>7</sup> did the critical analysis of al-Ghazālī's *contingency arguments*, which proposes Allah is the self-subsistent being and all other beings are depended on him. Hourani<sup>8</sup> also delves into the discussion between al-Ghazālī and Ibn Rushd over pre-eternity.

Literature review revealed that, the issue has not been studied creating new arguments other than historical. Similarly, it lacked the views of latest scientific inquiry, which this article seems to be the first to start. Hence, articles claiming of analysing philosophers' arguments with latest findings in science are new subject area to be investigated for other related topics also.

In the discussion, first, the proof of philosophers will be explained from *Tahāfut al-Falāsifah*. It will be followed by the objections from philosophical and scientific point of view. At the end it will be proven from modern science that in presence of cause, delay in effect is evident.

## **Debate Over the World Pre-eternity**

### ***Philosophers' Proof***

- 1) Temporal creation cannot proceed from eternal. If it is supposed that world came into being without God then, it was in pure possibility but to create its existence there must be a giver of preponderance

which will call the giver of first preponderance, hence infinity. Nothing can create nothing, hence possibility of everything (world) coming into existence from nothing is impossible. With question why it did not come into existence before its supposed creation? Who originated first giver?

- 2) If it is supposed from God, then from eternal only eternal can proceed, if not then why 'He did not will the creation before its creation?' it will be a change in eternal to suppose, that at one time He was not a willer of creation but later he became. It will also attribute (God forbid) the impotence of God. Also, every will demands a previous will going to infinite. Hence as long as God's eternity is true so is the eternity of the world.
- 3) The temporal occurrence is necessary and caused, like event cannot exist without cause which necessitates it. It is not possible for necessitating being with all its condition fulfilled, nothing else awaited, to delay it's necessitated effect. Necessary causes necessitate effect, both are simultaneous and priority is only in the sense of essence and rank, not in time.<sup>9</sup>

These are the fundamental proofs connected with cause and effects. In dealing with them, we will not go one by one rather involve in the central issue and discuss all of them within that realm.

### **Objection and Proof Against Pre-Eternity**

#### ***On the Definition of Priority and Simultaneous***

Says Aristotle, priority has five ways. (a) First is what belongs to priority in time, say Plato is prior to Aristotle. (b) Second belongs to the 'being' whose sequence cannot be reversed, say Unity is prior to two but its existence does not depend on two but two depends on one; father exist then son, reverse is not possible. (c) Third belongs to priority in science and oratory, say word is prior to sentence. (d) Fourth is what belongs to natural priority because of love and respect of someone. (e) Fifth call a prior cause by nature containing existence, as to say 'man is' is correct but not as the cause of the existence. Rather it is 'man's'

existence which decides the correctness of the statement, hence it is existence which is a real cause not the statement. Man's existence is prior to its declaration.<sup>10</sup>

(c) and (d) does not concern here. In the rest, Aristotle described in general, how priority can be defined. Neither he defines any necessary condition for them nor priority necessarily precedes and proceeds with cause and effect. It is preceding and proceedings of priorities, as to say Socrates is prior to Plato and Plato is prior to Aristotle. Similarly in sequence, unity is prior to all and existence is prior to proof. For priority, two things must proceed and precede each other as evident but there is a huge contradiction between (a) and (b). As per (b), unity is free from reversal; hence existence of unity denies its contrary, so no priority is possible in any sense.<sup>11</sup>

But (a) requires in time always two existences that should not be simultaneous to attribute 'priority'. Hence only two conditions come, either 'priority' ends at unity with certainty or is totally impossible. Later is self-evident contradiction so only former option is left. Considering this if one says – world is eternal with God, than this is wrong from (a) and (b) definition of priority. This is because the assertion of philosophers that cause and effects are simultaneous but cause is prior in essence not in time. However, there is nothing which can synthesize one of them prior in essence and rank but not in time, this differentiation is not evident. Says Aristotle:

“Has motion ever come to be without having previously been? And does it perish in turn in such a way that nothing is any longer in motion?”<sup>12</sup>

Here motion underlies change whatever form it may be. He explains, change required two things – Moved and mover. Mover makes change in moved. At first, this contradicts his definition (a) and (b) of priority. What is the proof of priority of mover over moved in both time and essence? Secondly, Aristotle in chapter-13 of *Categories* gives definition as to what could be called simultaneous:

“Those things are called simultaneous without qualification and

most strictly which come into being at the same time, for neither is prior or posterior. These are called simultaneous in respect of time. But those things are called simultaneous by nature which reciprocate as to implication of existence, provided that neither is in any way the cause of the others existence, e.g. the double and the half.”<sup>13</sup>

According to this definition, mover and moved are simultaneous in time or nature? Only four possibilities are there. If philosophers deny simultaneous in time than, it is evident that mover or cause precede in time denying their own assumption.<sup>14</sup> Second, if they accept mover (cause) and moved (effect) simultaneous in time, they actually are denying the definition of priority. Thirdly, acceptance of simultaneous by nature will not allow either one to be cause of others existence, hence mover cannot act on moved. Fourthly, if they deny simultaneous by nature, it is totally impossible for creation to exist.

In the same fashion, if God and the world both are eternal, they need to pass all the four conditions and in no case, world’s pre-eternity has any ground to pass, as per Aristotle’s own methodology. Hence, they cannot be called simultaneous, which denies ultimately that cause and effect are simultaneous without delay.

Further, if world’s pre-eternity is with God then, are they same in terms of essence and existence or different? If it is said, they are same in essence, then it is impossible for anything to exist when only mover-mover or moved-moved or cause-cause or effect-effect exist. On the contrary, if assumed differently, than its fallacy is evident, this is to say-sun instead of producing light, create darkness.

Lastly, how the philosophers prove, one eternal by essence does not change (God) and other eternal (the world) is continuous in change, this is a contradictory statement. Philosopher’s claim that eternal must proceed eternal is not a proof of eternity rather contrary to it. Whatever definition they consider for ‘Eternity’, it must be same for both cause and effect if eternal proceed from eternal. If it is considered everlastingness then it must proceed in future for both. And if it is said to be timelessness then it must be for both.<sup>15</sup> Everlastingness is defined as no beginning and no end, neither by existence nor by essence.<sup>16</sup> Essence belongs to the ‘whatness’ and existent what is attributed to that whatness or reality.

God, as philosophers admit, is eternal both by essence and existence; Question is how they define both terms for world in first instance? They propose in their proof:

“Before creation world was in pure possibility of existence and non-existence, but it came to existence, it means some previous cause existed to choose existence from non-existence”.<sup>17</sup>

Here arise two objections, first is what belongs to the definition of unity whose contrary based on priority cannot be surpassed. So once prior cause is there why there is a need to call infinite causes to support first effect? This is not logical to pursue till infinite, as philosophers also don't like this idea. Second objection is that once world existence is agreed upon, what is the essence of the World? Essence or reality of the world cannot be 'eternity' because when philosophers are comparing worlds pre-eternity with God, then eternity is only one of the attributes of the perfect being God.<sup>18</sup> Now, what other essence of the world, philosophers will propose as eternity itself is not the essence of the world? If one says, its essence is 'change' as described by the Aristotle and Heraclitus, then it is contradictory because they assume God to be uncaused and changeless.<sup>19</sup> How it is possible for one eternal to change constantly and one out of change being each other's cause and effect? Even attributing 'change' as essence of the world does not make sense. As for natural philosophers, change is what belongs to the very nature of things. Pre-Socratic period believed that matter is nature and Aristotle proposed an internal principle of change to be the definition of nature which corresponds to substances. For him the form is ultimate principle behind change defining what the thing is.<sup>20</sup> In this view, if the world exists with God, then two separate forms eternally existing is not possible. It will call two separate system of change one in which generation and degradation makes the process of change and second in which it does not happen. If both are same, what is the need of discussion? It is self-evident fallacy. Even if one considers eternity of the world, there is no excuse to accept, that eternity of world and God are not same with above distinction. Gods knowing of His 'Being' and 'what it is for' are identical, free from intellectual intervention, free from manmade human's

universal intellect or first intellect.<sup>21</sup> Intellect classifies order 'of and in' creation thus not worthy to use for Allah the Al-mighty as he said:

'And there is nothing that could be compared with Him'.<sup>22</sup>

This 'Nothing' does not leave anything of metaphysics, philosophy and science. The sense can be felt when 'I' know I can do this, such knowing exclude intellectual intervention. But when I know 'I do not know', intellect comes into existence. With this I can deduce what 'I do not know' is possible or impossible for me. The conclusion will become part of 'I' for future decision and then intellect would play no role again. If it is evident then for Allah 'everything' is known by himself. This 'everything' is that 'nothing' not worthy of comparison. Secondly, it will be a 'change' to use Intellect because that requires 'movement towards intellect'. For Allah, it is null and void as 'nothing' of 'everything' is out of His knowledge as described above. 'Change' fulfils 'what is not known' but if something is known already, change becomes irrelevant. When I say, 'I do not know physics', means to acquire the knowledge of physics I need change but when I say, 'I know mathematics' then no change is required. If it's evident, Allah Al-mighty says:

"... Allah has power over all things, and that Allah comprehends all things in (His) Knowledge."– (LXV:12)

When everything is known to Him by 'Himself', what is the change require for? Heraclitus of Greek says 'change is the only constant', which is correct in the sense that 'nature is end oriented' and end require a process to reach. Process itself is a change and combination of specific movements. It is true; nature ends whatever one believes. What is born will meet goal, is known to every existence. So what is changing if 'end' is 'known? The change is to 'what is it for' not what it is 'itself'. As new baby is 'I' when he/she is born and then in old age he/she is still 'I' the change was in his process to achieve that 'known end'. Now, there are two things – The end is known but how to reach that end is unknown, hence incomplete and imperfect knowledge.

Change is for what was not in existence before. If Allah is eternal, what defines change? To be living is not change but change is attached

to 'nature' it means change is not a constant for a 'living' being. God is 'living' rather than 'living life'. Never had He discussed about His life other than the attribute of 'living'. So, Heraclitus claim is null and void for Allah Al-mighty because He is out of change. As for Aristotle, change is eternal because to initiate a change another change is needed. Accordingly, if God is eternal, motion must be eternal. Aristotle lags to show that initially Allah Al-mighty (in his word the unmoved mover) was not alone without any creation.<sup>23</sup> In light of this lack, possibility of change is unimaginable. When God is eternal and self-sustaining annihilating all the possibilities within His knowledge, change is required for what? Aristotle's argument is reverse which needs a first motion, not the eternity of motion or change. If it is shown that, there was a first change; eternity of motion will be wrong. However, it can be argued if change is eternal, than relative to what? If in a room everything is stationary, what change one proposes until something changes? If that's the case, in the beginning everything was 'HE' alone with His attributes, why there is a sense of change? Like to say, presence of teacher and student in a class does not initiate change (transfer of knowledge) until teacher 'wills' to do so.

### **On the Essence and Existence of the World and God**

Above assertion draws distinction between eternity of the world and God. Former is with change and later out of change, then what other form of eternity philosophers define? The question remains open, what is the essence of the world? It can be said, there is no essence which can fulfil the requirement of that definition; every essence attributed to the world has one of the possible realities not the only one. Latest findings in the worlds structure at micro-level, shows different realities of the world. The branch which deals with micro-structure of the existences is called quantum physics.<sup>24</sup> It proclaims, on the basis of experiment that there is no single past and future of the world, the world in which we live is only one of the many possibilities that existed in past and will exist in future. Due to probabilistic nature it exists in the form as it is now. It also affirms, the world has in-deterministic nature and particle can exist at two places at a moment. Enlightened with this bizarre nature, modern scientist and philosophers agreed on the model-dependent reality of a thing. They professed that as model-dependent

philosophy, the planetary theory of Ptolemy with the earth as the centre of solar system and of Copernicus with the sun at the centre of solar system, both are correct, because on the basis of observation no one can deny either one.<sup>25</sup>

So there is no single reality or essence<sup>26</sup> of the world for granted. It was shown through the experiments in quantum physics, that world has no deterministic nature rather it is working on probability. Probability in the sense, based on current state of the world nobody can determine what will be the future existence, as was possible with Newtonian world view. In quantum world no certainty exists for particles for any specific location rather based on data it can be said, that particular particle can probably exist at different positions without certainty. In this bizarre world a cat can be alive and dead at the same time.<sup>27</sup> Conclusion is that the world of philosophers has changed from pre-eternity to probability. Now the question is not eternity but the very nature of many-world possibility and for sure that is not possible 'if eternal proceed from eternal with no characteristic of eternity'.

Modern approach is relativistic which calls for many realities rather than only reality. It accepts objective reality rather than actual. The question which can be asked is of the Plato's when he says:

“What about someone who believes in beautiful things, but does not believe in beautiful itself ... Do you think he is living in a dream, or is he awake? Just consider: isn't it dreaming to think – whether asleep or awake – that a likeness is not a likeness, but the thing itself that it is like?”<sup>28</sup>

In light of model dependent theory, realities are only ways to find reality but not the reality itself, as there are beautiful things but the question is what is the beauty itself? However, all this philosophy is based on observation and mathematical prediction, not about the eternal God but about the so called eternal world of philosophers. If that is the reality of eternal world which has no single reality then, how come it can proceed from the eternal, God, who has single, unaltered, unified reality? Yes, it is admitted that these conclusions based on observation and calculation were not available to earlier philosopher, so it can be justified that their notion of pre-eternity was not correct when it comes to 'only

eternal proceed from eternal' as there is no single reality for the world. This discussion is at first a negation of their doctrine and secondly a proof that both are not same (God and world's eternity), and if not same they cannot persist at the same time with different attributes at the beginning.

Contemporary exploration of universe has already predicted the ultimate fate of universe. As per data, there may be three shapes of the universe, flat, closed and open. They were predicted on the basis of visible and dark matter, dark and vacuum energy and average density of the known universe. The conclusion is that universe is flat but that is not at all the final verdict. Whatever universe one assumes, there remains always contrary hypothesis opposed to the Big bang. Big bang theory proposes that the universe began by an explosion from a singularity. Followed by the inflation which is responsible for everything we see including humans. Later observation of Edwin Hubble claimed that the universe is expanding which came to decelerate because of Einstein's cosmological constant demanding deceleration with other factors. Prediction of black holes comes which is attracting everything including light due to huge gravity. No one knows what happens after the matter crosses a limit called Horizon. Some predicted that, maybe that is a way to go in another universe like the hypothesis of wormholes. No one knows what exactly it is. It was then argued, if universe started from big bang and black holes are annihilating each thing, then universe must come again to singularity or in general term end followed by another big bang. To expand this idea, there are some theories like big crunch, big freeze, heat death, big bounce and big Rip. Scientists are finding big freeze theory more promising than others. As per big freeze, the universe due to its current expansion asymptotically will approach to absolute zero temperature. It is expected that the fuel of stars will be exhausted and the universe will become darker and black holes will dominate the universe followed by Hawking's radiation emission black holes will also disappear. Big crunch propose that average density of universe is enough to stop expansion and start contraction.<sup>29-33</sup> Even though, the claim of flat universe which will expand forever based on the calculation of matter and vacuum energy is not the final conclusion. Observational accuracy will reveal more accurate data about the structure and fate of universe because earlier observation did not detect vacuum energy at all, so it is probable

as to what does the data describe and existence of such theories which declare end of universe is self-evident due to complexity of universe. Hence, the eternity in terms of everlastingness has no solid ground as science predicts both big bang and big freeze for the same universe. Philosopher's assertion of the eternity in terms of everlastingness is overshadowed by their own so called 'eternal world'.

Second criteria eternity in terms of timelessness can be combined with temporal creation of the world in time. At first, if timelessness is taken 'without time' then it will be a serious attack on the philosophical definition of the time related to the world not for the eternal God, which philosophers already assumed to be out of change or time. This serious objection comes from Plato, he says about the definition of time:

“[the Demiurge] began to think of making a moving image of eternity: at the same time as he brought order to the universe, he would make an eternal image, moving according to number, of eternity remaining in unity. This, of course, is what we call “time”.<sup>34</sup>

Time is for the world, it is not a separate identity attributed to it. Rather it is 'within' the world connected with motion that can be counted. And for Demiurge<sup>35</sup> time is not in Him, neither He is in time, means demiurge is out of time and eternal. Being eternal is to get out of time. With this, the world as we know cannot exist without time; they are from each other to make a sense.

For Aristotle, as discussed earlier, the unmoved mover is out of change but initiate change and time is related to motion or change, which is intrinsic to the world. Then how come it is eternal in the sense of timelessness? If that is pure impossibility for the world to exist without time, then one has to admit its temporal creation which satisfies its opposite eternity. There is something between 'without change – God' and 'with change – the world', because without change can proceed only 'without change' not 'with change'. In between them is something which is connected to both, is it will? Will is a form and cannot be connected to the world with attribute of 'with change'. There must be some external form of the will, which connects both, is it the 'existence (either as light or spirit)' of Prophet Muḥammad (ﷺ)? The third option is 'nothingness' to which philosophers make their arguments. In view of

this assertion of nothingness philosophers may argue that this is our position that, temporal cannot be created from eternal, it is like that the world came out of nothing, and if one accept world out of nothing than why there is a need for its maker.<sup>36</sup>

One can say: ‘neither it is impossible for the world to be created in time nor its existence out of nothing’. Nothingness cannot be described in terms of pure possibility, impossibility and necessity of something, as they are pure mental forms of which existence and non-existence at the same moment are purely possible and impossible. The world is not only a form but also whole nature of change through matter (*māddah*), its existence is clear but not the essence and reality.

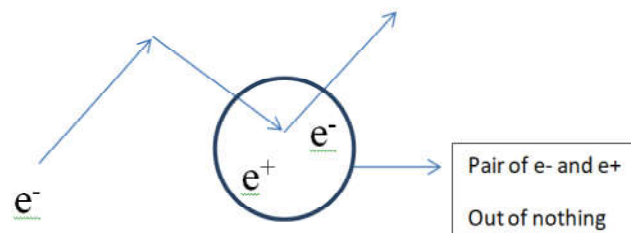
Moving backward from present state of the world will come a point where both its form and matter may have been started from ‘nothingness’, so nothingness must contain in itself these two qualities to satisfy the present condition of the world. To philosophers,<sup>37</sup> both forms and matter are different, but where there is matter there will be form, they cannot exist without each other. The world as evident has both form and matter, then ‘nothingness’ cannot be other than what is inherent in its explosion. It can be said – ‘*Nothingness is unconsciousness of essence and existence until willed by the Lord Al-mighty*’.<sup>38</sup> It will be illogical to assert nothingness is eternal in any sense. As when something neither known to itself by essence nor by existence, what category of eternity philosopher define for it? Or they are arguing over world’s pre-eternity or the pre-eternity of ‘nothingness’? Essence is abstract; but existence as discussed can exist externally. For temporal world there must be relation either between essence and existence or essence and non-existence. In the words of *Imām* Taftazānī:

‘The reality of a thing and its essence are that by which a thing is what it is, like ‘rational animal’ with reference to ‘man’ in contrast to ‘laughing animal’ and ‘writing animal’, since it is possible to conceive of ‘man’ without reference to them in as much they are among the accidents ... A thing (*al-shay*) according to us, is the existent (*al-mawjūd*); and subsistence (*al-thubūt*); realization (*al-taḥaqquq*); existence (*al-wujūd*) and coming-into-being (*al-kawn*) are synonymous terms, and the meaning of them is self-evident.’<sup>39</sup>

‘Nothingness’ cannot qualify such categorization of reality and essence, and we do not claim it a ‘thing’ also because it does not qualify the distinction. Nothingness is not known to itself reserves intervention of some other being to make it known through his action. We say, this is the will of the Lord which creates realization of ‘what it is’, to proceed the creation out of nothingness. This assertion is in no contrast with the contemporary view of the world also.

### **Creation out of Nothing: Encounter with Pure Arguments of Physics**

As per Dirac equation which was an attempt to unify the two different horizon of the so called ‘eternal world’ relativity and quantum physics, proposed one new particle same as electron in every sense but with positive charge. It was fundamentally a new look, but Dirac claimed that positive charge particle is proton and due to interaction with other proton in empty space, they become heavier. He was not correct, because within few years, physicists have found the particles proposed by Dirac equations within the cosmic rays coming to earth. That particle was called ‘positron’ the antiparticle, which motivated idea of similar antiparticles for other fundamental particle too. Characteristic of this new particles is that when they meet (positive and negative charge), they annihilate each other emitting radiation. From here the term matter and antimatter came into existence. Richard Feynman was interested to look at it from relativistic point of view. He argued that, no particle can go beyond speed of light and if it goes, it will go backward in time. This phenomena when observed, different observers will give different measurement of the same episode. He showed this phenomenon with diagram:



**Fig. 1** (Krauss, 2012)

If a single electron is moving through space, and for a very limited time that we cannot even measure precisely, electron moves with speed of the light. It gives impression to an observer that it is moving backward in time as shown in Fig. 1. First it goes forward (up) than backward (down) than up again. In between, one pair of electron-positron comes into existence out of nothing. That new born positron meets with existing coming electron and annihilates leaving radiation and at the end remains electron that seems to be moving forward in time. This pair coming into existence and then becoming non-existent seems to underlie the idea of nothingness proposed earlier. Their measurement however is not possible but their indirect effect is very well experimentally known and cannot be denied, these particles are called *virtual particles*. This property was tested on hydrogen atom with one electron showing spectrum within which forms a splitting area that signifies the existence of the virtual particles. Based on Dirac equation all the possible virtual particles can be known with very precision.

The second proof came with the discovery of more fundamental particles within proton and neutron that are called *quarks*. Virtual particles, reflecting the particle and field which convey the strong force between three quarks continuously exist and become non-existent. Protons are the fundamental particles giving mass to the atom. When measured it is found that quarks themselves contribute almost very little of mass but the field created by them contributes most part of the energy which becomes the rest energy in proton, which atom contains and that is mass. This is astonishing, as to how field created by virtual particles which can be called 'nothingness' or in scientific term 'space' or 'vacuum' is a source of energy?<sup>40-43</sup> That was the most mysterious discovery of era.

Later on it was found that to match the observed acceleration of the universe the energy needed was 30% of visible (the world) and 70% of the empty space, now called dark energy.<sup>44</sup> Now, it will be a wrong assertion that, this is due to God Who is creating particles out of nothing as there may be more fundamental beings which only God knows and there is no hurry to claim. Rather it can be claimed, if as per scientists including philosophers, the world is able to create its own things out of nothing then what premises do they have to negate the possible temporal creation of the world out of nothing by

Ever Powerful, God? If, philosophers and scientist accept it for the world then, they must accept it for God too. It can be said:

‘Initially only the God existed Who is eternal encompassing all the Power. He created consciousness to nothingness when He willed and it became everything. Underlying in the natural law and events there exist hidden nothingness which will remain with them until God Will’s again to make it unconsciousness of its essence and existence’.<sup>45</sup>

Here, no attempt is made to show what the role of will is but to use it as a proof over philosophers claim that, temporal cannot proceed from the eternal, here we see that it proceeded. If this is true, then creation in time by default is true. Nothingness is what God is not and nothingness cannot be eternal without essence and existence. Similarly, as discussed, time is synonym of the world without which it has no meaning, which singled out the conclusion that- Time and the world were created simultaneously.

For the modern science, it is believed based on facts that if the universe is expanding it must be started from a singularity. This singularity is named as Big bang, which due to huge density and temperature exploded creating everything what we see. It explain in great detail about the light elements, cosmic microwave background, large scale structure, Hubble’s law and can be jointly explain by the quantum as well as relativistic approach. By knowing the expansion rate of the universe given by Hubble, it is now known that big bang exploded some 13.8 billion years ago, which is the age of the universe. Big bang is still not fully understood due to quantum phenomena attached to it at quantum level, so below the plank era,<sup>46</sup> the reality is unknown.

A new theory called ‘quantum gravity’ is in process to answer what lies behind the plank era.<sup>47-48</sup> However, the aim of discussion is to provide demonstrative proof, asked throughout *Tahāfut al-Falāsifah* by the philosophers, then here is the proof that as per experimental and demonstrative proof – The world is created out of nothing 13.8 billion years ago. Both claims of philosophers have met their end, now no point providing the eternity of the world. This is another debate between physicist and theologians, even if physicist consider the creation of the

world with time, they do not mean it was due to God rather due to self-sustaining natural laws.<sup>49</sup>

### **Causality Broken: The Proof of Delay in Effect**

Ibn Sīnā (Avicenna) had developed his theory of essential necessary, which became the landmark for the proof of world's pre-eternity. This theory has two parts, first, only God is uncaused in all existent. Second, everything is caused by necessity because it is incumbent upon existent to produce effect by its very nature. Fire burns cotton by its very nature and any delay when in contact is impossible. It demands cause and effect are simultaneous and delay is not possible. This is the basic argument for world pre-eternity that, if God creates by necessity of his nature which is eternal and without change, then effect must proceed from him, just as the sun cannot but produce slight.<sup>50-51</sup>

Imām Al-Ghazālī has not raised any objection to the first part that, God is uncaused but he severely attacked the second classification of Ibn Sīnā's essential necessary that God creates by necessity.

It is not intended to delve into the discussion of what does 'necessity' means here, but an elaboration will make things clear. The idea of necessary being goes back to Aristotle's prime cause or the unmoved mover. According to him, the prime cause must be simple having no priority. He denies every existent to be that prime cause, because 'things' are combination of matter and form, matter is receptacle of form which demands change with this it is also not unity in the sense they depend on each other. This composite or holomorphic substance is particular existence which is the essence of its thingness, so its essence and existence cannot be distinguished. Even if Aristotle accept holomorphic primary substance in the sense other realities depends on it but at the end it is a combination of two. However he concludes that:

“there must be some principle whose very substance is actuality and matter cannot be that. Only form can be that pure actuality which will be out of change, things depend on it but it does not depend on anything, the unmoved mover or primary cause”.<sup>52</sup>

Ibn Sīnā, following the same principle of simplicity, advocated the

same. He replaced the form and matter with essence and existence. For him beings are three; possible, necessary and impossible. All the generated things, he says, are pure possibility until they come into existence and are not necessary in themselves but necessary by something which is necessary in itself, this is *Al-Mumkin fi-Dhātih* and *al-Wājib bi Ghayrih*.<sup>53</sup> Every possible being is a combination of essence and existence<sup>54</sup> and it is known that essence defines the reality of things, but that essence itself is not a logical form on the contrary it is real in itself. Until it is connected by existence its essence cannot be known. For Ibn Sīnā, existence is something added to essence. Similarly like form and matter, every possible being when composed of essence and existence, needs a cause to make it necessary. When it is known, then what does necessary being (*wājibul-wujūd*) means? No possible being qualify to be a necessary being because it's a combination of essence and existence, necessary in itself. Existence requires a cause, so the same cannot be true for necessary being to become necessary in itself. What then is alternative? This is to ascribe pure existence to necessary being because essence cannot stand alone which will require cause to make it exist and which will be non-existence in another sense. So necessary being (*wājibul-wujūd*) must be pure 'existence' without a separate essence, or its essence and existence are same. This implies the oneness and unity without any prior cause or change because it is necessary in itself and is a cause for all possible beings. As Ibn Sīnā (Avicenna) was not inclined towards the creation from nothing, he advocates the idea of emanation like Neoplatonist and claims, God, by necessity, creates the world without any delay, and if God is changeless and eternal so does the world.<sup>55-56</sup>

Once understood, it was more the requirement of Ibn Sīnā's own metaphysical system to have a Being necessary in nature, which must produce by necessity. The objection of Imām Ghazālī was as per the Qur'ān that: Verily, when He intends a thing, His command is "be" and it is!"<sup>57</sup> The development of system regarding metaphysical reality is not new neither it is prohibited for true illuminist people. Like, Plato, Aristotle, Platonist, Ibn Maskawaih<sup>58</sup> to name but few. Ibn Sīnā also developed his system as per his right to prove the existence of God. In light of this, he cannot be blamed of disbelief; rather his rejection of voluntary action by Will of God is the supreme premise available for scholars to rule something.<sup>59</sup> However, this article will not attempt to discuss the nature

of His 'necessity being' but about His characteristic that 'He creates by necessity because delay in effect after cause is impossible.

For Muslim theologians and Ibn Sīnā as philosopher, God is uncaused and eternal having all the Power in him. It can be said that:

'If it is supposed that like God the world is eternal, then characteristic of eternal world necessarily follows from eternal God. So if delay in effect with cause is proved within the world, then it must be assumed that the Eternal God can also delay the effect having all the Power. As causal necessity within the world and from where it proceeds, is the central proof for the eternity of world, if it is denied, then it must be true for God also'.

In view of the above premises it will be proven from modern science.

At the quantum level things are unpredictable in the sense that, no one can find at a time their position and speed, which is called uncertainty principle.<sup>60</sup> In second view, no one can say without measurement whether something exist or not, this is shown by the famous thought experiment of cat by Schrodinger in 1935. Then, as per theory of everything, which is supposed to be the M-theory, there are possibilities of  $10^{500}$  different universes from a single source- the big bang, the first singularity.<sup>61</sup> The creation reached from pre-eternity to probability, and surely Ibn Sina or any Muslim philosopher would not allow the same multiplicity for the ultimate reality or cause God. They are fond of the idea that God can create multiples in purest and fundamental form – Essence and existence, form and matter. The question is why then the eternal world is like this? Even though based on theories of quantum physics, intellectuals have argued either in terms of multi-universe, deterministic nature, probabilistic nature and some even argued effect prior to cause called retro causality.<sup>62</sup> This article argues that this is due to the delay in effect.

Photon is the basic particle of light considering particle theory of light. At high energies this photon can be split into two particles, negative electron and positive positron and their combination can further create the light particle photon. Photon is supposed to be the carrier of energy 'quanta' responsible for photoelectric effect. This energy is responsible for worldly processes. To prove the claim, consider the below system:

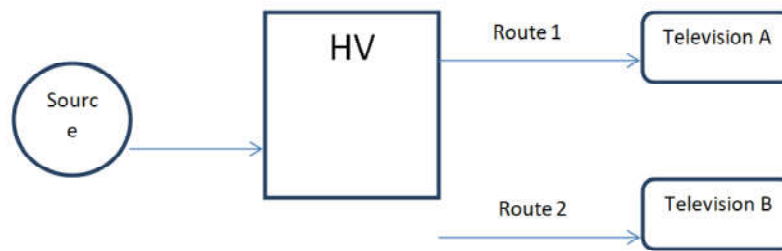


Fig. 2

Suppose there is a source of photon, which is connecting with differently located television A and B through Horizontal-vertical polarizer.<sup>63</sup> To run the television A photon must go through the route 1 and for television B, through route 2. When there are lot of photons from the source then both the television will show football match without disturbance. Because from 'lot of' some will be going to route 1 and some to route 2, but it cannot be predicted which photon is going to which route. Condition is normal as we see but now consider only one photon to be supplied at once at two different times. Let's say at time  $t_1$  Photon 1 is triggered from the source, but it should be known that for both televisions the ultimate source and cause is only one – the source itself. No one can predict now in which route the photon will go, so if it chooses route 1, then television B will not work, even though the person watching football match knows that cause (the source) is continuously providing photon.

Similarly, at time  $t_2$ , photon 2 is triggered and it chooses the route 2, so television A will not work, even though cause with all conditioned fulfilled is acting. For both cases, the person in room, will obviously feel why there is a delay when source is producing photon? Without knowing that television A is working. In the first case with photon 1 at  $t_1$ , this is delay in the world of person watching television B and in second case; this will be a delay in the world of person watching television A. For both persons, condition is similar that in presence of source there is a delay in effect. Similarly an outsider who is watching this process will surely feel the same, that there is a delay for a time for both the worlds comprising man and television. This process is happening in same duration of time.

Further, if it is supposed that, these two people with their television exist in two separate countries. Then for one country there will be no

football at the same time when second country is watching the match. Extend this idea further and replace countries with two separate universes. So at a time, in one universe in presence of cause, there will be no football match when other universe will be enjoying it. If that is not the delay in effect after presence of cause, then what type of delay philosophers propose? This is self-evident delay. It can be checked through experiment, locating cause or source at one location, and plan two distinct location for effect to take place without disturbing the cause itself.

The selection of route is said to be by chance, chance is nothing but will itself which decide that chance, whether route 1 or route 2. That is what the EPR paradox is all about that 'how come one electron knows about its partner what it is doing at other place, when they both came from the single source.'<sup>64</sup> People have proposed hidden variables for the same reason. That is some kind of information exchange, but without knowing 'when' it does not make any sense and that requires interference of 'will'. Again it is not claimed that this is the Will of God who is creating selection power to photon or directly controlling the act, as who knows what more fundamental things underlie within photon. On the contrary it is claimed that chance and delay are interrelated, chance must precede from cause and cause cannot be other then will which is the ultimate source of every kind of selection. Selection can be between time, similar things, different things and whatever one can think of but will remains the primary source of action even if one has power to do anything.

In light of the above discussion, if the world with all its multiplicities, generation and degradation, probabilities can delay the effect due to unknown reasons, then philosophers must assume the same for the Lord without contradicting their own premises. If it is agreed then, on what basis philosophers will claim the eternity of the world if God as per his will can delay the creation in future? Similarly, for uncaused God, it is more possible to delay the effect because of priorities in other attributes not appropriate for the world. The world itself is denying any possibility of its pre-eternity, and that is what the essence when Al-mighty says in Qur'ān:

“Soon will We show them our Signs in the (furthest) regions (of the earth), and in their own souls, until it becomes manifest to them that

this is the Truth. It is not enough that thy Lord doth witness all things?"<sup>65</sup>

Concerning the 'necessity being' (*wājibul-wujūd*) of God there are two options. First is to attribute Him a nature which by necessity creates and second is to attribute 'will' in place of necessity. In both the cases, creation will come into existence and if one disagrees then what is there to stop him? As for the first case, it is against the Qur'ānic description of God and creation. On the contrary second option is totally inline. It will be a good assumption to accept second option as far as Muslim philosophers are concerned. They must know about the Qur'ānic interpretation about God and nature. Ibn Sīnā's denial of world's temporal creation was his conception that 'world cannot be created from nothingness'. As per him, his metaphysical system was the only metaphysical system to prove the existence of God which demanded 'necessary being' that creates by necessity. Since, on that time it was impossible to comprehend creation from *ex nihilo* or 'nothingness'. It was not a mistake on part of both Ibn Sīnā and Al-Fārābī to conclude 'necessary being' rather it was the knowledge of nature available to them at that time as their premises to prove God's existence. Now, 800 years later, after knowing the mysteries of the world, it will be totally wrong to assert any 'words' to their personality as far as this topic is concerned.

In light of all the objections and proofs against the world pre-eternity, it would be always best to assert and proclaim the views of *Hujjatul Islām Imām Ghazālī* about this topic which he claimed in *Tahāfut al-Falāsifah*:

'The world was temporally created by an Eternal Will that decreed its existence at the time in which it came to be, that non-existence continued to the point at which (the world) began; that existence prior to this was not willed and for this reason did not occur; that at the time in which (the world) was created it was willed by the eternal will to be created at that time and for this reason it was created then'.<sup>59</sup>

For the nature of God, let it be known then:

Our God does not act by necessity that by definition He has to act on the contrary He is voluntary in his action and He does whatever He Wills. He does not require necessary causation to operate the universe rather he acts at every particle coming and going'

### Conclusion

Arguments and proofs about the world pre-eternity as given in the first discussion of *Tahāfut al-Falāsifah* has been analysed with new perspective. The central argument proposed by the philosophers that cause cannot delay the effect and God is the necessary cause, so it must create the eternal world. Philosophers claim was based on the assumption that the world cannot be created from nothingness. This has been refuted from philosophical and scientific arguments and is established that it is possible to delay the effect from self-evident proof. Further, world's temporal creation has been established through detailed analysis of philosophical as well as scientific proofs. The article established from the modern science that what al-Ghazālī proposed in *Tahāfut al-Falāsifah* is found to be correct with no deviation that world is not eternal and delay in effect is possible.

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  15. Eternity has been defined by different ways from pre-Socratic era till 20th century. Famously it was proposed by Plato in his *Timeaus*, when he described the definition of Time, followed by Aristotle who defined the final cause of every matter to achieve eternity in his *De Anigma*. Al-Kindī, however denies the pre-eternity of world proposing eternity as synonyms of Divinity. Then al-Rāzī, proposed that ‘Eternity’ is infinite extension which does not supervene motion and within which God creates the world, hence he also consider world not eternal, see Fakhr al-Dīn Al-Rāzī, *Maṭālib Al-‘Aliya Min Al-A‘am Al-Alihi*, First, Beirut, Dar al-Kitab al-Arabi, Beirut, 1987, <https://www.alkitab.com/15729.html>.
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  21. Aristotle in Book 8 of *Physics* and Book 12 of *Metaphysics* describe that there must be an immortal, unchanging being, ultimately responsible for all wholeness and orderliness in the sensible world', this corresponds to the unmoved mover and represent the active intellect. See for more detail on the discussion of active intellect – Wisnovsky, *Avicenna's Metaphysics in Context*.
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