Task Force Essay: Modern Science and Challenges to Some Islamic Theological Doctrines

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Introduction

Modern science infiltrated the Islamic world in the beginning of the nineteenth century. But what affected Muslim intellectuals mostly was not science itself; rather, it was the transfer of various philosophical currents, entangled with science, which had a profound effect on the mind of Muslim scientists and intellectuals.

Schools like Positivism and Darwinism penetrated the Islamic world and dominated its academic circles and posed some challenges to several Islamic theological doctrines. Some scholars attempted to reinterpret some of the Islamic theological issues in the light of modern science.

But some Muslim philosophers differentiated between the findings of modern science and its philosophical underpinnings. They advocated the discovery of the secrets of nature through experimentation and theoretical work, but warned against its positivistic interpretations, advertised in the name of science. In the company of the last group, I believe that the source of the claimed conflicts between modern science and religion is to be found mostly in the philosophical attachments to science, rather than science per se. Here, we elaborate on several crucial challenges which are propounded, in the name of science, concerning the existence of .God, life, spirit and purpose in nature

The Problem Of Life And Spirit

According to the Holy Qur'an, human beings have a physical dimension as well as a spiritual one. The latter comes into being at a later stage in the development of the human body, and has non-material nature. It is a Divine Grace emanated to every human being

"When your Lord said to the angels, 'Indeed I am going to create a human out of a dry clay [drawn] from an aging mud. So when I have proportioned him and breathed into him of My

spirit, then fall down in prostration before him'." (15:29)

The idea that human beings have a dual aspect, i.e. physical and spiritual, is an old one and has been a controversial problem since old times. In our time when empiricist philosophy is dominant, the primacy is attributed to matter, and life is considered as a byproduct of physico-chemical processes, leaving no room for the human soul. Francis Crick, who was one of the discoverers of the structure of the DNA molecule, says this clearly

'The astonishing Hypothesis is that "you," your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules.'1

The prevalent outlook restricts reality to what is detectable through physico-chemical processes. But this outlook cannot be derived from science per se; rather, it is rooted in the naturalistic philosophy ruling over contemporary scientific circles. Roger Trigg describes the matter beautifully

"Why should not a transformed science one day even be able to accept the existence of 'spiritual' realities Only a metaphysical decision now that such things cannot exist would suggest that that is impossible. The question is whether we are concerned with the nature of reality, or with the validity of a scientific method tailored to current human capabilities."2

In response to the position of materialists concerning the problem of life and spirit, Muslim philosophers argue that

(a) In addition to the material dimension, human beings own a spiritual dimension that appears when the conditions for its appearance are fulfilled. In fact, spirit is a special effusion of Allah to each individual human being. The denial of this spiritual dimension by materialists is not a scientific decision; rather it is a metaphysical decision not rooted in empirical science.

Mutahhari, a contemporary Muslim philosopher, describes the Qur'anic position concerning this matter

"The Qur'an's logic concerning life is that an effusion [of Allah], at a higher level than the sensible body horizon… This logic is based [on the fact that] sensible matter, by itself, lacks life and that life is an effusion and a light from a higher source"3

It is interesting that John Eccles, a Nobel Laureate in Medicine, says the same thing

'Since materialist solutions fail to account for our experienced uniqueness, I am constrained to attribute the uniqueness of the Self or Soul to a supernatural spiritual creation. To give the explanation in theological terms each Soul is a new Divine creation which is implanted into the growing fetus at some time between conception and birth.4'

Neville Mott, a Nobel Laureate in physics, concurs

“I believe, too, that neither physical science nor psychology can ever ‘explain’ human consciousness … To me, then, human consciousness lies outside science, and it is here that I seek the relationship between God and man.”5

Furthermore, a number of eminent contemporary physicists, without any reference to metaphysics, believe that consciousness, which is a manifestation of spirit, is not explainable in terms of physics. For example, Schrödinger says

“Consciousness cannot be accounted for in physical terms. For consciousness is absolutely fundamental. It cannot be accounted for in terms of anything else.”6

Even Richard Dawkins, who believes that science can ultimately explain everything, admits that consciousness is one of the most difficult problems. In an interview from October 2009, he says

“Consciousness is the biggest puzzle facing biology, facing neurobiology, facing evolutionary biology. It is a very, very big problem.7”

Popper, however, believed that ‘the origin of life will probably remain un-testable forever and that even if scientists create life in a laboratory, they can never be sure that life actually began in the same way.’8

(b) Physico-chemical processes prepare the ground for life, i.e. they are necessary conditions for the emergence of life. But they are not sufficient conditions. Muslim philosophers do not deny the material ground for life, but they believe that at a certain stage of the physical development of a body, it is through God’s effusion that life is developed in human beings. In Mutahhari’s words

“The synthesis, addition, subtraction and combination of the parts of matter are necessary conditions for the appearance of life effects, but they are not sufficient.”9

Materialists only see part of the problem, but they claim that they are seeing the whole. A radio is necessary to broadcast the signals sent by a transmitter, but it is not sufficient. There has to be a transmitter.

(c) Even if one day human beings bring about living organisms, theists’ claim for the existence of a spiritual element is not disproved. Because they can claim that when the material ground of life is ready, Allah will effuse life to it, as He is the owner of infinite effusion. As Mutahhari put it

“If some day human beings discovered the law of creation of living beings … and discovered all conditions and material parts of a living creature … does that creature become a living one or not The answer is that it certainly becomes a living one, as it is not possible that the conditions for the diffusion becomes available but it is not realized…

“If some day human beings get this opportunity, what is essentially done is the preparation for the appearance of life, not the creation of life.”10

Mulla Sadra, an eminent Muslim philosopher of the 17th century, believed that the soul appears at a certain stage of trans-substantial motion of the body. However, the body is not the cause of the soul, but it provides the ground for the emergence of the soul

“In truth, the human spirit is material in creation and action, but it is immaterial in subsistence and intellection.”11

After emergence, however, the soul does not depend on the body and survives the body’s .death, i.e. it is immortal. In short, soul has a corporeal ground, but a spiritual subsistence

Creation Of The Universe

Modern cosmology started with Einstein’s 1917 article entitled, “Cosmological Considerations about General Relativity.” Einstein applied his theory of general relativity (GR) to the whole universe. Einstein’s equations have different solutions, but GR cannot choose a solution by itself. In 1929, Hubble noticed that the spectra of light reaching us from galaxies is red-shifted12 and this shift is proportional to the distance of that galaxy from ours. This was interpreted in terms of the expansion of the universe, and led to the big bang model of the universe that implies an initial time for the creation of the universe.

In the 1940’s, Fred Hoyle and his collaborators presented the steady-state model of the universe, which claimed that there was no temporal beginning to our universe. The steady-state theory appealed some physicists, because they thought that with this theory they can dispense with the idea of a Creator for the universe. Weinberg is very clear about this

“The idea that universe had no start appeals to many physicists philosophically, because it avoids a supernatural act of creation.”13

Similarly, Stephen Hawking says

“Many people do not like the idea that time has a beginning, probably because it smacks of divine intervention.”14

The discovery of the microwave background radiation in 1965 gave an impetus to the big bang model of the universe.

In the last three decades, atheist physicists have been after the elimination of the initial moment of time, as they considered this as an indication of the creation of the universe by an external agent. In Hawking’s words

“So long as the universe had a beginning, we could suppose it had a creator. But if the universe is really completely self-contained, having no boundary or edge, it would have neither beginning

nor end it would simply be. What place, then, for a creator"[15]

But the assumption of no beginning in time, does not make the universe self-explanatory, as Paul Davies explains

"The fact that the universe might have no origin in time does not explain its existence, or why it has the form it has. Certainly, it does not explain why nature possesses the relevant fields (such as the creation field) and physical principles that establish the steady—state condition."[16]

Furthermore, as some Muslim and Christian scholars have indicated, creation does not mean creation in time. Rather, it means dependence on God. As Arthur Peacocke put it

"The principal stress in the Judeo-Christian doctrine of creation … is on the dependence and contingency of all entities, and events, other than God himself it is about a perennial relationship between God and the world and not about the beginning of the Earth, or the whole universe at a point in time."[17]

Furthermore, in Philip Hefner's view

"Creation for Christian theology is by no means limited to protology. It is not limited by what happened at the beginning when time was first created. Creation also refers to God's ongoing sustaining of the world. Every movement of the world's existence depends on the ongoing grace of God."[18]

This is similar to the view of Mulla Sadra, an eminent 17th-century Muslim philosopher, who believed that our world is recreated at every instant. Mulla Sadra, however, considered no beginning for the creation. In his view, the belief in the uninterrupted effusion of Allah requires eternality of creation. The argument, in Mutahhari's words, goes as follows

"They have thought that the theory of eternity of matter is inconsistent with the belief in God. But there is no inherent connection between this theory and the denial of God; rather, theist philosophers believe that belief in God requires belief in the eternity and continuation of His grace and creativeness, which requires the eternity of creation."[19]

On this basis, Mutahhari concludes that there could have been other worlds before our world

"On the basis of monotheistic principles we should say that there is no beginning for the universe. If [it turns out] that this universe has a beginning, there should have been another world, [possibly] in different form… In order for the world to have a God, who is inherently all-emanating and eternally graceful, there should have been always creatures existent".[20]

Arthur Eddington was hesitant about the Big Bang theory on the same grounds

"As a scientist, I simply do not believe that the present order of things started off with a bang;

unscientifically, I feel equally unwilling to accept the implied discontinuity in the divine nature."21

Does The Universe Have A Purpose

In the Qur'anic view, God is the Creator and the Sustainer of the universe. He has created everything in measure and has decreed for it a talos22. The creation is in truth, not for sport or vanity, and everything has a definite term

"We did not create them, save in truth". (44:38)

"We have not created the heavens and the earth and whatsoever is between them, save in truth and for a definite term". (46:3)

"We did not create in sport the heaven and the earth, and whatsoever is between the two …" (21:16)

"We have not created the heavens and the earth, and whatsoever is between them, for vanity …" (38:27)

The above verses imply the creation of the universe by God as well as its guidance by Him. In fact, the Qur'an talks of a universal notion of purpose and a direction to the created universe

[Moses] said "Our Lord is He, Who gave everything its creation, then guided it." (20:50)

Imam Fakhr al-Din Razi, in his celebrated commentary on the Holy Qur'an, has elaborated on the distinction between the creation of a thing and its sense of direction.23 This sense of direction is a mysterious dimension present in everything, directing it toward its proper God-assigned role.

Following the Qur'an, Muslim theologians have never ignored teleological24 considerations, and the silence of modern science about this point has not affected their view, though it has had a silencing effect on Muslim scientists.

Teleology played an important role in medieval science. For the scientists of that era, every created thing had its special place in the hierarchy of the created world, because it was created by a God who had designed a telos to the universe. The founders of modern science, who were devoted theists, did not deny the presence of telos to the universe, but they did not consider the job of science to deal with teleological considerations. But the negligence of teleological considerations by the scientists of the last few centuries is partly due to their heavy involvement with mathematical manipulations and the predictive aspects of science, and partly due to the false assumption that questions of teleological nature hinder further development of science.

With further development of modern science and the dominance of empiricist outlook,

teleology was considered as an avenue for theism. Therefore, atheists have been insisting on denying any kind of teleological considerations. In Atkins' words

'A gross contamination of the reductionist ethic is the concept of purpose. Science has no need of purpose. All events at the molecular level that lies beneath all our actions, activities, and reflections are purposeless, and are accounted for by the collapse of energy and matter into ever-increasing disorder.'25

Similarly, Steven Weinberg sees no visible purpose in the universe

"The present universe had evolved from an unspeakably unfamiliar early condition, and faces a future extinction of endless cold or intolerable heat. The more the universe seems comprehensible, the more it also seems pointless."26

But can one, on the basis of data obtained from chemistry or molecular biology at the level of atoms and molecules, claim that there is no telos to the nature The answer is no, because this conclusion is not drawn directly from science. Rather, it is rooted in the metaphysical prejudices of the scientists involved. It is, in fact, a jump from an epistemological statement to an ontological one, and is a direct result of restricting the whole of existence to the material world and the sources of our knowledge to sense impressions.

In response to Weinberg who denies any purpose in the universe, Paul Davies mentions two important points if the universe has no purpose, then there would be two problems (i) scientific effort would be meaningless, and (ii) the more we search nature, the more it seems incomprehensible

"If [the universe] isn't about anything, there would be no good reason to embark on the scientific quest in the first place. Because we would have no rational basis for believing that we could thereby uncover additional coherent and meaningful facts about the world. So, we might justifiably invert Weinberg's dictum and say that the more the universe seems pointless, the more it also seems incomprehensible."27

Later on, Weinberg himself qualified his earlier statement about a pointless universe by saying that

"I believe that there is no point in the universe that can be discovered by the methods of science."28

But, contrary to what Weinberg says, some scientists and philosophers (both in the Islamic world and in the West) think that there are some clues to the teleological aspects of our universe in modern science. One has to be perceptive to discover such clues. For example the notions of purpose and design of the created universe has recently attracted much attention to the so-called anthropic principle, according to which the physical constants of nature are so-

finely tuned that if they were slightly different, carbon-based life could not have developed and we would not be here.

Anthropic coincidences call for an explanation, and there have been several explanations. In the monotheistic religions, one can take them as an indication that God planned the universe with human beings in mind. Other explanations carry heavy loads of metaphysical assumptions which, in my view, are much more involved than the explanation in terms of a priori plan by an intelligent designer. For example, the most serious alternative to the design hypothesis, is the many-worlds hypothesis, in which one postulates infinite universes to explain the fine tuning of fundamental constants. In Stephen Hawking's words

"The multiverse concept can explain the fine-tuning of physical law without the need for a benevolent creator who made the universe for our benefit."29

But, as Paul Davies says, this carries too much baggage and the existence of many worlds is not scientifically disprovable

"Not everybody is happy with the many-universes theory. To postulate an infinity of unseen and unseeable universes just to explain the one we do see seems like a case of excess baggage carried to the extreme. It is simpler to postulate one unseen God …

"Scientifically, the many-universes theory is unsatisfactory because it could never be falsified what discoveries could lead a many-worlder to change her/his mind"30

It is interesting that the idea of the multiverse, which is used by atheists for denouncing God's existence implied by the entropic principle, is used by both Muslim and Christian scientists and philosophers to secure the idea of everlastingness of God's grace. In Mutahhari's words

"Maybe they are right that if we go back so many years, the world did not have the present order. But how do we know that there had not been another world before ours with a different order"31

In addition, some theists have asserted that an all-powerful God could have created many worlds, rather than just one world. In the words of George Ellis

"Does the idea of a multiverse preclude the monotheistic idea of a creator God… I argue that the answer is, no … the ideas can exist together. God could have chosen to operate via creation of multiverses. The multiverse proposal says nothing about ultimate causation (chance, probability, design) All the same anthropic issues arise as for a single universe Why this multiverse and not another one"32

Notes

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Scribner’s Sons, 1994), p. 3.
2. Roger Trigg,
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4. John Eccles, Evolution of the Brain Creation of the Self (London Taylor & Francis, 2005), p. 249.
5. Neville Mott, Can Scientists Believe (London James & James Science Publishers Ltd., 1991), p.8.
6. Erwin Schrodinger, “General Scientific and Popular Papers,” in Collected Papers, Vol. 4 (Vienna Austrian Academy of Sciences, 1984), p. 334.
7. httpttbook.orgbooktranscripttranscript-steve-paulson-reports-consc...
8. John Horgan, The End of Science (Great Britain Little, Brown and Company, 1997), p. 38.
9. Murtadha Mutahhari, Collected Works, Vol. 13 (in Persian), p. 38.
10. Murtadha Mutahhari, Ibid., pp. 58–59.
11. Mulla-Sadra (adr ad-Din Mu ammad Shirazi), al-Hikmat al-Muta’aliyah fi al-Asfar al-Aqliyyah al-Arba’ah (Beirut Dar Ihya al-Turath al-Arabi, 1981), Vol. 9, p. 347.
12. Redshift and blueshift describe how light shifts toward shorter or longer wavelengths as objects in space (such as stars or galaxies) move closer or farther away from us. The concept is key to charting the universe's expansion.
Visible light is a spectrum of colors, which is clear to anyone who has looked at a rainbow. When an object moves away from us, the light is shifted to the red end of the spectrum, as its wavelengths get longer. If an object moves closer, the light moves to the blue end of the spectrum, as its wavelengths get shorter.
13. Steven Weinberg, The New Yorker, 12 June,1997, p. 20.
14. Stephen Hawking, A Brief History of Time (London Bantam, 1988), p. 46.
15. Ibid., p. 141.
16. Paul Davies, The Mind of God (London Simon & Schuster, 1992), p. 56.
17. Arthur R. Peacocke, Creation and the World of Science The Bampton Lectures, 1978 (Oxford Clarendon Press, 1979), p.78.
18. Philip Hefner, “The Evolution of the Created Co-Creator” in Cosmos as Creation, ed. by Ted Peters (Nashville Abingdon Press, 1989), p. 227.
19. Murtadha Mutahhari, Collected Works, Vol. 1 (Tehran Sadra Publications, 1995), p. 524.
20. Ibid., p. 524.
21. David Layzer, Cosmogenesis (Oxford Oxford University Press, 1990), p.137.

22. Talos In Greek mythology, Talos or Talon was a giant automaton made of bronze to protect Europa in Crete from pirates and invaders. He circled the island's shores three times daily. Wikipedia.

23. Fakhr al-Din Razi, al-Tafsīr al-Kabīr, Vol. 31 (Beirut Dar'Ihya' al-Turath al-Arabi), pp. 138-140.

24. Teleology or finality is a reason or explanation for something in function of its end, purpose, or goal. It is derived from two Greek words telos (end, goal, purpose) and logos (reason, explanation). A purpose that is imposed by a human use, such as that of a fork, is called extrinsic. Source Wikipedia.

25. John Cornwell (ed.), Nature's Imagination (Oxford OUP, 1995), p. 127.

26. Steven Weinberg, The First Three Minutes (New York Basic Books, 1977), p. 154.

27. Paul Davies, The Goldilocks Enigma Why Is the Universe Just Right for Life (Great Britain The Penguin Press, 2006), p. 16.

28. httpwww.pbs.orgfaithandreasontranscriptwein-frame.html

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30. Paul Davies, The Mind of God (New York Touchstone, 1993), p. 190

31. Murtadha Mutahhari, Collected Works (in Persian), Vol. 10 (Tehran, Sadra Publications, 1976), p. 405

32. George Ellis, "The Multiverse, Ultimate Causation and God", ...httpswww.faraday.st-edmunds.cam.ac.ukresourcesGeorge%20Ellis%20Lect