

FAITH IN SCIENCE

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It (Quran) is a guidance for the righteous, who believe in the unseen. (Al Quran 2:4)

Science without religion is lame, religion without science is blind. (Albert Einstein)

This will not be your usual religion and science article. My aim is to discuss this topic at the most fundamental level possible and remove a delusion that most in the scientific community suffer from, in particular, Professor Richard Dawkins.

The thesis I shall establish is that Science is based on Faith. The purpose behind making this clear is not to debase science or offend Dr. Dawkins but rather to emphasize that the Holy Quran put forward a formulation of religion in exactly the same way that modern science is formulated and did so in the early part of the 7th century CE.

The important issue that needs far greater discussion and understanding is what constitutes the equivalent of experiment and observation in the religious context — because the value of the scientific enterprise lies in the conducting of experiments and the testing of scientific theories thereby.

So far wherever I have read or talked with persons inclined towards adopting a modern approach to the investigation of religious truths I have found them looking with their ears and trying to feel with their eyes...what I mean to say is that their attempts to investigate religious truths have been all totally ill-conceived. Without a proper appreciation and understanding of what it is that one is looking for, it is impossible to devise how to go about looking for it.

Central to the discussion of religion is a correct appreciation and concept of God. It may be asked how and through what means can a person find God? The very first means of achieving this goal is to recognize God Almighty correctly and to know the correct attributes of the True God. For if the very first step is not right, for instance, if a person believes in a bird, or an animal, or in the elements, or in the issue of a human being, as god, there can be no hope of his treading along the straight path in his further progress towards God.

When scientists started to investigate what an atom is really like they had in their mind some rough ideas and then based on that they started to devise experiments that ultimately opened up a totally new realm of nature to humanity.

I hold scientists and the scientific method in great esteem. Underlying their whole endeavor is the fundamental belief that there is understanding and insight and gain to be had pursuing their struggle. The universe is not pointless. Islam, as laid bare in the Holy Quran and as practiced by the Holy Prophet Muhammad^{saw} and as rejuvenated and explained in the modern age by the Holy Founder of the Ahmadiyya Muslim Community carries this one step further. Not only is there gain in adopting a scientific approach to the study of nature but a scientific formulation of religion and its use to understand the Author of the Universe is also a most beneficial enterprise and one that has great merit and value and satisfying philosophically and intellectually, far more than the pointlessness that many modern day philosophers assign to a godless existence and purposeless existence of the entire universe.

According to this understanding, the scientific formulation of religion leads one to an experimental basis for establishing daily increasing faith in the verities of spiritual truths in exactly the same way in which this process advances in the scientific study of nature.

According to this understanding, the purpose of the creation of the universe is to lead one to an understanding and appreciation and knowledge of the Creator of the Universe.

This is such a sublime and satisfying understanding that Dawkins would do well to listen with patience. I ask him for the same patience that he no doubt counsels students undertaking a study of Physics and wanting to know all the answers to everything the first day. 'Be patient,' I recall my teachers telling me all those long years of studying, 'once you have grasped the basics, things will be easy for you to comprehend, but till you know the basics it is pointless you trying to understand our answers.' If it takes 15 years of study to get to a B.Sc level of understanding of Physics, how much patience should one be expected to show to understand God, if He is indeed conceived as being the Creator of all that is in existence.

Reading Dr. Dawkins' recent tome one comes out with the final result which can be summed up as a simple, an unrelenting doubt: Perhaps there is a God! How satisfying can such an epitaph be to have on one's tomb? The sum total of one's life work, a simple unrelenting doubt? In its place, we shall show that a most satisfying and fulfilling and true epitaph awaits those who follow the scientific formulation of religion that Islam lays out, complete with experiment and touchstone to truth that is easily repeatable. So, let us try and clear up some things for scientifically minded people. To start at the beginning, it is necessary to remove a very prevalent misconception in the world that faith has no place in science.

The fact of the matter is that all scientific theories are based on faith...that is their starting point, and I say this without any doubt whatsoever – indeed this is one of

the very few statements one can make without exception and any chance of being contradicted.

Let me repeat: Every scientific theory starts with an irreducible, finite set of assumptions that are assumed to be true, on pure faith. This is an admitted fact, though, as I shall show shortly, it is never so blatantly admitted as I have stated it here.

Once these finite number of assumptions, that, in headier days, were elevated to the status of 'absolute truths' but nowadays are usually referred to simply as hypotheses, once these finite number of assumptions are made, a theory is constructed based on their being accepted as being true and eventually testable predictions are produced.

In the final analysis, however, all that any theory can look forward to is that, sooner or later, a day, it would be more appropriate to say, a night shall arrive when an observed phenomenon will not be accurately predicted or explained by the given theory. This leads inevitably to a re-examination of the underlying assumptions and a new theory emerges based on a different set of pure assumptions.

Old beliefs are abandoned and replaced by new ones.

Now here is how, what I have just said is more conventionally stated in scientific literature, for that let me borrow words from Tom W. B. Kibble and Frank H. Berkshire:

“Every scientific theory starts from a set of hypotheses, which are suggested by our observations, but represent an idealization of them. The theory is then tested by checking the predictions deduced from these hypotheses against experiment. When persistent discrepancies are found, we try to modify the hypotheses to restore the agreement with observation. If many such tests are made and no serious disagreement emerges, then the hypotheses gradually acquire the status of 'laws of nature'. When results that apparently contradict well-established laws appear, as they often do, we tend to look for other explanations – for simplifying assumptions we have made that may be wrong, or neglected effects that may be significant.

It must be remembered however that, no matter how impressive the evidence may be, we can never claim for these laws a universal validity. We may only be confident that they provide a good description of that class of phenomena for which their predictions have been adequately tested. One of the earliest examples is provided by Euclid's axioms. On any ordinary scale, they are unquestionably valid, but we are not entitled to assume that they necessarily apply on either a cosmological or a sub-

microscopic scale. Indeed they have been modified in Einstein's theory of gravitation ('general relativity').

The laws of classical mechanics are no exception. Since they were first formulated by Galileo and by Newton in his Principia, their range of known validity has been enormously extended, but in two directions they have been found to be inadequate. For the description of the small-scale phenomena of atomic and nuclear physics, classical mechanics has been superseded by quantum mechanics, and for phenomena involving speeds approaching that of light, by relativity.

This is not to say that classical mechanics has lost its value. Indeed both quantum mechanics and the special and general theories of relativity are extensions of classical mechanics in the sense that they reproduce its results in appropriate limiting cases."¹

The point made in the cited quote regarding domains of validity etc. are no doubt meaningful, but it must be emphasized that when a theory such as classical mechanics that had a vast range of validity and had at one time made men giddy with potential implications in the philosophic, psychological and even spiritual realms, and that had successfully explained such a vast array of observed phenomena...when it was found that new observations were not just a small amount in contradiction with its predictions, but were factors away from the predictions of the theory or in some cases were infinitely wrong, the effect was indeed very humbling.

Prior to such discoveries, the success of the theory had indeed made scientists of that era raise the status of the fundamental beliefs on which this theory was based into things they were often used to calling, 'absolute truths.'

So when such a fantastically successful theory came unhinged, necessarily there were some major errors, not just small inaccuracies, in the fundamental assumptions and the whole underlying concept of absolute space and time had to undergo an immense change. This was to take care of relativistic phenomena. A similar change in the assumptions relating to the ability of being able to make as precise a measurement as one desired, had to be accommodated to take care of phenomena at the atomic and microscopic level.

It is clear then that before anything can be theorized one has to start with a limited number of assumptions and these are things one cooks up, so to speak, and the fewer the better and the more elegant the better but what is required most is that they result in a predictive theory for the whole construction to be of some value. If one has a theory that has as many variables in it as the number of things one is trying to explain there is not much to be gained.

Keep all this in mind as we read the statement that the Holy Quran makes in its very beginning. It says with regard to the people who are righteous that their beginning quality is that they believe in the unseen. It is my contention that this is precisely the beginning point of all scientific theories. The Holy Quran states:

“In the name of Allah, the Gracious, the Merciful. Alif Lam Mim. [I am Allah, the All-Knowing] This is a perfect Book; there is no doubt in it; it is a guidance for the righteous, who believe in the unseen and observe Prayer, and spend out of what We have provided for them; And who believe in that which has been revealed to thee, and that which was revealed before thee, and they have firm faith in what is yet to come.” (Al Quran 2:1-5)



Let me here quote a little explanation and commentary on: *Who believe in the unseen*; by Hadhrat Maulana Nur ud Din, may God be pleased with him, one of the foremost Muslim religious scholars of his time [1841- 1914] in India. He states:

“Why does Taqwa [righteousness], which is the root of every formula for achievement and success, require at its very start for one to believe in the unseen, as is said in the Holy Quran: yo’maynoona bil ghaibay. The reason for this is that every achievement, whether it be in the worldly realm, or in the realm of spirituality and faith, its true and real basis is indeed faith in the unseen and it is by beginning with this that in the end very great feats in acquisition of knowledge and learning are accomplished and the fine points of hidden verities discovered. If, for example, a boy on the very first day argues with the teacher as to why he refers to ‘alif’ as ‘alif’ and asks why he does not call it by some other name then can such a student make any progress? Never! He shall have in any case to listen to the teacher and accept whatever his teacher says as being correct, only then will he be able to make any progress.

Then, when we consider all the fields of knowledge, whether they be mathematics, Euclidean geometry, algebra, geography or natural philosophy, in all of them, if in the beginning, some things are not accepted as true for argument’s sake then man cannot take a single step forward. In the beginning when he accepts these as true then the doors to the discovery of great truths in knowledge and art are opened to him.

The departments of police, when they try to investigate the background related to a particular case, they, in some such cases even take for granted the truth of statements made by some most sinister criminals and by following up on these assumed to be true statements they eventually reach to the truth of the matters relating to the case. So we see that starting by accepting as true some purely hypothetical things man can often be led to the discovery of great truths. Similarly, if people with atheistic tendencies were to accept as a starting point the existence of Allah, the Exalted, and taking this for granted were to act on the teachings of the Holy Prophet of Islam, then they would see the many types of results that they would attain. And if those people who are not gifted with the direct converse with God and for them Allah still belongs to the realm of the unseen, if they too were to take His existence for granted and were to have prayers offered for them they too would be blessed with many great and blessed results.

The reality and truth behind the concept of eeman bilghaib [faith or belief in the unseen] has been laid bare also by Hazrat Ahmad (as), the Messenger of Allah in his book Ayena Kamalat-e-Islam and in his other holy books. There, it is clearly stated how necessary belief in the unseen is for the salvation of man and that if this does not exist then there is no hope that any kind of action can be undertaken by man through which he may become deserving of receiving the bounties of God. When upon seeing smoke from a distance a man reckons that there must be a fire where there is smoke - at that stage his state of knowing is only a conjecture- unless he advances in the direction of that smoke and puts his hand in those flames, until that time his knowledge cannot acquire the character of detailed and certain knowing. In fact the condition of such knowledge is what is referred to as faith. In the same way, by seeing some circumstantial things he can develop a sort of conjecture that perhaps God exists and thus there develops in him a desire to attain certainty of knowledge regarding His existence which becomes the cause for his attaining progress.

To travel from conjectural knowledge towards certainty of knowledge, man requires to undertake and exert a certain amount of effort and there is found in his heart during this time a certain degree of restlessness and anxiety so for this reason the second quality or attribute of a muttaqee [righteous person] is stated by the Holy Quran to be that he establishes prayer [yuqeemoonas salata]."²

In scientific theories relating to observed phenomena, in what is nowadays called Physics and was earlier called Natural Philosophy, it is experiment or observations of nature that ground a theory to reality.

In Islam as taught to us by the Holy Quran and the Holy Prophet of Islam and as laid bare further in the modern age by Hazrat Mirza Ghulam Ahmad of Qadian (as), the Holy Founder of the Ahmadiyya Muslim Community, that touchstone is earnest, sincere, heart-rending prayer seeking the help and assistance of God Himself and the consequent receipt of fresh and pure revelation confirming beyond any doubt whatsoever the existence and Power of God and this is what is stated by the Holy Quran.

Before I go on to a more complete discussion of this, I want to say a little more about religion as presented by the Holy Quran and its parallels with science.

Let us just look at the Principle of Limits: In the passage I cited from Kibble and Berkshire there was a discussion relating to the domain of applicability of classical mechanics. In the limit of velocities small in comparison to the speed of light ordinary classical mechanics applies. Similarly when we are considering phenomena on the macroscopic scale, classical mechanics works fine. The analogy in the religious context is that when man was living a simpler life and peoples were in touch only with each other in a range of a few miles, very simple laws were sufficient. Also, when life was extra-ordinarily confined to a very small number of things, nothing much was needed and a set of Ten Commandments were enough. The more complicated and complete laws need to reduce to the same kind of answers when similarly simple conditions prevail.

It is in this context that the Holy Quran says that it is incumbent on its followers to *believe in that which has been revealed to thee and that which was revealed before thee and they should have firm faith in what is yet to come.* [2:5]

In science this is always there – it is always the case that when new phenomena are discovered that require and mandate newer theories – the requirement is always that in the limit in which the old theories worked, the newer theories must reproduce those old results. Similarly, there is a belief in science that this process will go on and there is no end to it. And my point is that the same is the case in religion, to say otherwise is to contradict the statement of the Holy Quran just cited.

What is necessary now is that we understand what prayer is. The greatest difficulty that people like Dr. Dawkins have is that they have a concept of religion that is false and they lack an understanding of what prayer really is. This was also the case of a very famous Muslim scholar [Sir Sayyid Ahmad Khan, Founder of the Aligarh Muslim University] in India some 130 years earlier. A complete and satisfactory elucidation of this topic has been written by the Holy Founder of the Ahmadiyya Muslim Community. I invite Dr. Dawkins to patiently read and act on the understanding offered in this small book and see if he is not able to achieve the certainty of the Existence of God by following the methodology offered therein sincerely. Sincerity and effort and patience are required and the best example I can offer is that of Rutherford when he was trying to discover the

true nature of an atom. He had a clear mind, not an empty mind, but a clear mind that was open to seeing any and all data that the experiments he conducted laid before him, and the explanation he attempted after the data was in hand.

Now let me quote from a book, Blessings of Prayer by Hadhrat Mirza Ghulam Ahmad:

“Now, for the benefit of the general public, I will briefly set out the facts about the acceptance of prayer. Let it be clear that this subject is part of the larger subject of prayer, and it is a matter of principle that one who is not conversant with the fundamentals of a subject is bound to be mistaken and deceived in understanding its branches. This is why Sayyid Sahib has also been mistaken. Prayer, in essence, means a relationship of mutual attraction between a righteous person and his Lord. This means that God’s grace first draws a person towards Himself, and then, through the magnetism of the person’s sincerity, God draws closer to him. In the state of prayer this relationship reaches a point where it manifests wonderful qualities. When a man in grave difficulty falls down in prayer with perfect certainty, perfect hope, perfect fidelity, and perfect resolve; and when he becomes perfectly alert and advances far into the field of self-annihilation, tearing aside all veils of heedlessness, lo and behold, he finds before him the Divine threshold, and he perceives that God has no associate. His soul then prostrates itself at the Divine threshold and the power of attraction that is invested in him draws the bounties of God Almighty towards him. It is then that the Glorious God attends to the fulfillment of the desired objective, and casts the effect of the prayer on all the preliminary means, which, in turn, produce the means that are essential for the achievement of the objective.

For example, if the prayer is for rain and it is accepted, all the natural means which are necessary for causing rain are created as a result of the prayer. If the prayer is for famine, the All-Powerful One creates the opposite means. And this is why the eminent recipients of revelation and men of perfection have proven with their extraordinary experiences that the prayers of a perfect one are endowed with a power of creation.

That is to say, under Divine command, prayer influences the lower and higher strata of the world and sways the elements, heavenly bodies, and hearts of men towards the desired objective. There is no shortage of such examples in Divine scriptures. In fact, some kinds of miracles are also the result of the acceptance of prayer. Prayer is the source of the thousands of miracles shown by Prophets as well as the marvels that have been displayed by the saints to this day. And, more often than not, it is through prayers that the supernatural signs of Divine Omnipotence are manifested.

Have you any notion what was the strange event that occurred in the wasteland of Arabia when hundreds of thousands of the dead were revived within a few days, and those who had been misguided through generations exhibited Divine complexion, and those who were blind began to see, and those who had been dumb began to utter words of Divine wisdom, and the world underwent a revolution which no eye had seen before and no ear had heard of. Do you know how all this came about? It was the supplications during dark nights of one who had lost himself in God which caused a revolution in the world, and showed such wonders as could never have been expected from that Unlettered and Helpless one [the Holy Prophet, peace and blessings of God be upon him].

I too have observed from personal experience that the effect of prayers far excels that of water and fire. In fact, nothing in the chain of natural causes is as gloriously potent as prayer.

If someone is in doubt because some prayers are not accepted and are apparently ineffectual, I would say that the same is also true of medicines. Have medicines closed the door of death, or is it impossible for them to fail in their purpose? And yet can anyone deny their effect? It is true that Predestination comprehends everything, but it has neither rendered the sciences useless nor has it shown the means to be unreliable. If you reflect deeply enough, you will see that the physical and spiritual means are not outside the sphere of Predestination. For instance, if a sick person's destiny is favorable, all the means for the proper remedy become available and his physical condition happens to be such that it is ready to derive full benefit from the remedy, and the medicine also finds its mark accurately. The same principle applies to prayer. All the means and conditions for the acceptance of a prayer only become available when God wills to accept it. God Almighty has bound both the physical and spiritual orders in the same chain of cause and effect. Thus, it is a gross mistake on the part of Sayyid Sahib to accept the physical order and to deny the spiritual one."³

In the end I recommend to Dr. Dawkins, in the spirit of the quest of Mr. Stanley for Livingstone, 'ask the one who claims to have seen God,' and perhaps you will find some guidance to reach God. If you say there are so many such people, then know that, yes, there are, but those genuinely interested in finding even such comparatively worthless things as gold, go the distance and make the requisite effort to sift and sort and learn to recognize the genuine from the fake and thus arrive at what they are looking for. Let me convey to you what great treasure awaits the seeker after God, and thus hopefully entice you to make the effort:

"Our God is our paradise. Our highest delight is in our God for we have seen Him and have found every beauty in Him. This wealth is worth

procuring though one might have to lay down one's life to procure it. This ruby is worth purchasing though one may have to lose oneself to acquire it. Oh ye who are bereft, run to this fountain and it will satisfy you. It is the fountain of life that will save you. What shall I do, and how shall I impress the hearts with this good news, and by beating what drum shall I make the announcement that this is our God, so that people might hear? What remedy shall I apply to the ears of the people so that they should listen?"⁴

Let me conclude this article by a quote from a book *Revelation, Rationality, Knowledge and Truth* from the chapter, *Belief in the Unseen*:

"To believe in the 'unseen' is a fundamental constituent of the Muslim faith as mentioned in the verse quoted above.

...

The journey of the believers is enlightened with the wisdom of this verse which leads them on to an endless voyage of discovery. For them there is no void, no emptiness, but just curtains waiting to be lifted from the limitless treasure-houses of knowledge.

However much pride we may take in the small knowledge we possess, by comparison it is as insignificant as a molehill by the side of a vast lofty mountain range. But the mountain ranges we know here on earth are not endless and infinite. The mountain ranges of knowledge that we are talking about extend into the limitless expanse of eternity with no beginning and no end."⁵

The author is perhaps alluding to the verse of the Holy Quran:

And if all the trees that are in the earth were pens, and the ocean *were ink*, with seven oceans swelling it thereafter, the words of Allah would not be exhausted. Surely, Allah is Mighty, Wise. (Al Quran 31:28)

¹ Classical Mechanics by Tom W. B. Kibble and Frank H. Berkshire, Imperial College Press, 5th Edition.

² Hadhrat Maulana Nur ud Din. Haqaiqul Furqaan. Vol I, under Verse 4 of Ch.2 of the Holy Quran.

³ Hadhrat Mirza Ghulam Ahmad. Blessings of Prayer: <http://www.alislam.org/library/books/Blessings-of-Prayer.pdf>

⁴ Hadhrat Mirza Ghulam Ahmad. Kashti Nooh, p. 19-20.

⁵ Hadhrat Mirza Tahir Ahmad. Revelation, Rationality, Knowledge and Truth. http://www.alislam.org/library/books/revelation/part_4_section_3.html