

THE CONCEPT OF SCIENTIFIC KNOWLEDGE IN ISLAM

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The powerful impetus given by The Holy Quran to the study of nature and surrounding realities and the reflection and reasoning, for discovering the signs of Allah, transformed the early Muslims into ardent students and researchers. They traveled to all corners of the world in the quest for knowledge and took to the study of natural phenomena with religious fervour and commitment, observed nature carefully and undertook extensive experimentation to gain insight and understanding of the nature of things. They gratefully and freely accepted, assimilated, integrated and advanced the available accumulated scientific knowledge, wisdom and learning of the then existing civilizations. It was in the field of natural sciences that they made outstanding advances and achieved the greatest triumph. This upsurge of scientific activity among the early Muslims is an irrefutable proof of the inherently rational and empirical orientation of the Islamic ideology and world view. Modern science owes a great deal to this early effort of the great Muslim scientists and thinkers.

2. Infact the period from the eighth to the twelfth century A. D. was the period of Islamic glory. It was a period of phenomenal rise and remarkable achievement in Muslim thinking and understanding. During this period Muslims developed a great thirst for learning, a craving the like of which history had never known before. Islamic civilization had reached its zenith and Muslims became world leaders in philosophical and scientific thought. A number of research centers were created which provided the dynamic infusion of science and wisdom in statecraft and helped in the development of forward looking and enlightened Muslim society. These crowning successes were largely due to tremendous ideological motivation provided by Islam for the study of natural phenomenon and pursuit of empirical knowledge.

Knowledge for What?

3. In the very first verse of Quran revealed to the Prophet of Islam (S.A.S.) the importance of reading, writ-

ing and acquiring knowledge was expounded in a very clear, decisive and direct manner. The prophet (S.A.S) further elaborated this and proclaimed that to seek knowledge should be the faith with every Muslim man and woman and he or she must continue to acquire knowledge from the cradle to the grave and follow it wherever they can acquire it. This was enjoined as a sacred religious duty for Muslims 1400 years ago although it is only in the recent past the world has recognized its importance. There is a comprehensive saying of the Prophet of Islam (S.A.S) quoted by Ibn Abd-al-Ilm which runs as follows:

"Acquire knowledge. It enables the possessor to distinguish right from wrong; it sustains us in adversity, it is a weapon against enemies and ornament among friends. By virtue of it Allah exalteth nations, and maketh them guide in good pursuits, and giveth them leadership so much so that their steps are followed, their deeds are imitated and their opinions are accepted and held in respect".

One cannot think of a better description of knowledge, its need and its attributes than what the prophet (S.A.S) has explained in this Hadith.

4. There is another revelation in the Holy Quran that those believers to whom knowledge has been vouchsafed occupy higher ranks and exalted positions (58, 11). It has been further ordained that those who know and those who do not know cannot be equal. Infact in Islam, the responsibilities of a person who knows and who can observe and think for himself have been laid down as greater than someone who does not know and who cannot contemplate. Therefore, the responsibilities of scholar or the scientist, who is trained to be knowledgeable, as well as observant and rational, are far greater than the ordinary citizen in preserving peace and harmony in this world.

Source of Knowledge

5. The fundamental principle of Islam is the Unity of Allah. Allah is absolutely one and no other being is equal to him. He is the creator and Sustainer of the universe. Every thing moves under his command. He is absolute truth and absolute reality, he is "al Haaq". The knowledge

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must, therefore, be of truth and reality consequently the chief source of knowledge is Allah the Almighty.

6. Allah knows everything that is in the Heavens and earth. The knowledge that is vouchsafed to man is only a small part of the totality of the knowledge that the Almighty possesses. What has been created by Him is flawless and precise. The laws of nature are absolute and can be verified again and again. Therefore, everything has its own place nature and scientific function to perform. Those who seek knowledge have enough opportunities to verify their findings and prove the correctness of their observations. There is so much to know that no one can know the whole of it. It is only Allah who knows all and everything including the invisible. Man can only know what is disclosed to him.

7. The real nature of things are transcendental and belong to the unseen world the knowledge of which is not amenable to human perception and senses. Knowledge is infinite and the total insight and understanding is known to Allah only. The method often used by Almighty is that He reveals this knowledge of unseen to his chosen Prophets who in turn transmit it to their followers who are believers. Consequently Islamic perception of knowledge is that Quran is the main lighthouse of knowledge and all light and guidance must come from this revealed word of the Almighty. Although Quran is not text book of science its greatness lies in the guidance and the framework it provides for integrated and holistic approach to life and for acknowledging the power, greatness and kindness of the Creator. One must draw inspiration from this reservoir for the study of all knowledge that is known today and the one that would be discovered in future.

8. Quran proclaims that "all that is in the Heavens and in the Earth has been subjugated to man". He has been told again and again to conquer nature by acquiring its knowledge as this knowledge would indeed provide abundant good for him. He is called upon, therefore, to reflect upon the signs of Allah in the Natural Phenomenon.

"Assuredly in the creation of Heavens and of the Earth; and in the alternation of night and day; and in the ships which pass through the sea; and in the rain which Allah sendeth down from heaven, giving life to the Earth after its death, and scattering over it all kinds of cattle; and in the change of the winds, and in the clouds that are made to do service between the heavens and the earth are signs for those who understand (II-164)".

9. The search of knowledge does not stop with the knowledge of physical world, it goes beyond and far beyond the realm of science. For a true Muslim life process does not end with physical world. It continues further. There is whole lot of invisible world the knowledge of which is known to Allah only.

Search of Knowledge

10. There is an abiding impulse in every human being to seek understanding and knowledge. The fundamental motivation of scientific knowledge and scientific endeavour is the deep curiosity about the nature of the world, the discovery of truth and the creation of order. When this curiosity combines with vision the scientists begin to see more and discover more about the surrounding reality. The search for truth is basic purpose of science. Science does not, however, attempt to reach absolute truth or ultimate knowledge of reality, it only endeavours to get closer and nearer to it as much as is humanly possible. Science has its limitation. It can only work with what can be comprehended by human intellect and senses. It cannot deal with what is beyond and what lies outside.

11. Infact, both the revealed knowledge and the value system of Islam strongly support observation, inductive reasoning and experimentation in study of natural phenomenon. Search of truth is the method of Islam and, therefore, pursuit of scientific knowledge strengthens the faith of the believer. The quest of knowledge, creativity and innovation has a sanction of the Holy Quran and is extolled by the Holy Prophet. It must, therefore, be pursued vigorously and with full commitment and dedication. The prophet's main prayer was "O God increase me in my knowledge" and "O God may I see things as they are".

12. Another dimension of the search of knowledge for a Muslim is that in doing so he discovers the objective of his creation and his actual place in the overall scheme of things. He begins to know why he has been created and what is expected of him. If he does right what reward he will get and if he does wrong what punishment he will be inflicted upon. What is going to happen when he dies and what is in store for him when he departs from this world. Quran further guides man how should he seek knowledge. What methods must be used and what procedures must he follow in pursuing it. There are clear instructions for him in The Holy Book which he must faithfully follow. Furthermore he is not only ordained to seek knowledge, he is also asked to disseminate it and share it with others. It is a gift from Allah and, therefore, it must be freely distributed among other people who need it.

13. The basic function of knowledge is indeed that of problem solving. Any knowledge that cannot or does not solve the mundane problems of humankind or does not help the individual to know more about his Creator is in fact no knowledge. In true Islamic tradition only such knowledge as ennobles is worth pursuing; knowledge which is used for unworthy purposes is regarded as being poisonous as the bite of a serpent. Modern scientific

knowledge besides bringing comfort and happiness to common man in his life style and mode of living has also created destructive weaponry, nuclear armament; material for biological and chemical warfare which if unleashed can annihilate the human race from the globe within hours. The value system given by Islam is indeed that of co-exploitation, aggression and destruction that we see in the developing order brought about by the power of scientific knowledge in the world today.

Islam and Modern Science

14. The inspiration, the conscience and the moral given by Islam for the acquisition, dissemination and advancement of knowledge are not only well known but are now recognized universally. History is witness to the fact that Muslim philosophical thought and scientific knowledge of its golden period had essentially a moral and religious base. The entire scientific effort was devoted towards understanding of natural phenomena, opening of new frontiers of knowledge, discovering of hidden resources and developing of new processes for the welfare and wellbeing of the humanity at large. This moral was peace and prosperity through science and not war and destruction that we see today.

15. At the zenith of its civilization of scientific achievement, Islam produced its own unique culture and tradition of science. It developed a mould of science and knowledge which progressed and flourished under the paradigm of belief in divine unity and the unity of universe and reflected the Islamic value system. Islam always tried to integrate the sacred and the temporal. The application of knowledge and science in Islam is for beneficent ends and in harmony with the purposes of the Creator. Consequently knowledge was not considered an end in itself; it was a means for the attainment of higher moral and spiritual goals. Unlike modern science, there is no dehumanisation, abstraction or alienation in Islamic Science.

16. In the period of their ascendancy, the Muslim scientists firmly believed, in confirmity with their faith and religion, in the oneness of God, the unity of the universe, the unity of all mankind, and the infallibility of the divine law. All knowledge according to them was a confirmation of Divine unity and purpose. Science in Islam is based on this unity of nature, order and creation.

Infact in Islam there is no science for the sake of science and no knowledge for the sake of knowledge. Everything is for an end which is using scientific knowledge for the good of humanity at large. The Islamic approach towards the cultivation of knowledge has always been holistic and integrated. Islam recognizes the relevance of social function with knowledge and value system of the society. Islam believes that there is unity between man and his knowledge. Consequently certain existing philosophies and their operational forms cannot be fully and completely assimilated and justified in Islamic framework of knowledge and action.

18. A major factor in the misuse of modern science and technology for destructive ends is its supposed value-neutral framework. The renaissance of science and learning in Europe was accompanied by a separation of the religious and the secular, due to the peculiar conditions then prevailing. Knowledge has increasingly come to perform a utilitarian function, whose ends are determined largely by the prevalent and dominant distribution of societal power. Knowledge and science have become a means towards the continued pursuit of whatever aims are deemed appropriate by those with the greatest influence, prestige, and control. They are a major tool for social manipulation and the service of profit.

19. Unfortunately, the early conflict of science with the Church has led modern science to arrogate to itself an exclusive prerogative to apprehend truth and reality, thus reducing man's capability to develop an integrated appreciation of reality and to react to it rationally and holistically. Modern man, therefore, stands disoriented by a total lack of value and purpose. The assumption of value neutrality of science adopted by the West, because of the conflict between the Church and science has brought mankind to the brink of destruction and this needs to be re-examined in a correct historical and rational perspective. Modern science, mistakenly based on the separation of the secular from the religious, has cut off its moral mooring. The world needs to re-think the assumptions that led to the creation of this value-neutral framework. The highly integrated and holistic framework of Islamic science provides an alternative model, which permitted the growth of science and learning, as well as, protected society from its misuse. This model has succeeded once and can be tried again.