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Muhammad Suheyl Umar

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IQBAL'S VIEWS ON THE MATERIAL AND SPIRITUAL FUTURE OF HUMANITY

Dr. Javid Iqbal

Iqbal's world-view is based on his deep concern with the future of humanity as well as religion. On the future of humanity his thoughts are scattered in his poetic works and some of his prose writings. But on the future of religion he has elaborated his ideas in the last chapter titled "Is Religion Possible?" of his book *The Reconstruction of Religious Thought in Islam*.

Broadly speaking, religion is required for the moral uplift of man. If there had been no man, there would have been no need for religion. Therefore humanity and religion complement each other. It is proper to assess Iqbal's view on the future of humanity before considering his ideas on the future of religion.

I wish to commence the discussion by defining two relevant terms. These are: (a) Development, and (b) Modern Man. "Development", in the modern context, means "increase in per capita income of a nation-state". This purely materialistic concept of development is generally considered a Western innovation. And what do we mean by the expression "Modern Man"? Certain changes took place in the mentality and way of life of the Western man as a result of the dissemination of materialism and the evolution of Western Europe from a developing to a developed society. Modern Man is sometimes called Industrial Man, Technical Man, Mass Man, One-sided Man, Angry Man, Lonely Man etc. He believes in the supremacy of science and technology of which he himself is a product. He relies on reason and feverish activity. He is secular, proud, selfish and amoral. He seeks happiness only through multiplying material comforts and wealth. According to Iqbal, he is so much overshadowed by the results of his intellectual achievements that he has ceased to live soulfully i.e., from within.

Many liberal thinkers and poets of the West have criticized Modern Man. There is a very interesting passage in Iqbal's *Reconstruction* Lectures in which he shows his disillusionment from both Western man as well as Eastern man. About Western man, he comments: "In the domain of thought he is living in open conflict with himself, and in the domain of economic and

political life he is living in open conflict with others He finds himself unable to control his ruthless egoism and his infinite gold-hunger which is gradually killing all higher striving in him and bringing him nothing but life-weariness. Absorbed in the 'fact', that is to say, the optically present source of sensation, he is entirely cut off from the unplumbed depths of his own being".

About Eastern man, he laments: "The condition of things in the East is no better. The technique of medieval mysticism by which religious life, in its higher manifestations, developed itself both in-the East and in the West has now practically failed Far from reintegrating the forces of the average man's inner life, and thus preparing him for participation in the march, of history, it has taught him a false renunciation and made him perfectly contented with his ignorance and spiritual thralldom". (*Reconstruction* pp. 148-149).

Generally speaking, Modern Man is Western man and he is found in materially prosperous countries, technically called I.D.Cs (Industrially Developed Countries) as opposed to U.D.Cs (Under Developed Countries).

What took place in Europe which eventually led to the development of materialism and the emergence of Modern Man?

The European society in the Middle Ages was a feudal society. The average man lived as a serf, totally dominated by cruel feudal lords and a static Church. The hold of the Church was primarily based on Ptolemy's cosmology, according to which the earth was the centre of the universe and everything including the sun revolved around it. On the basis of this cosmology, the position adopted by the Church was that man was under the direct gaze of God. Thus the Church being the Vicar of God, and with the support of the feudal lords, had acquired enormous power over the ignorant, superstitious and frightened masses who were exploited for centuries.

However certain events or movements in Europe changed the then existing state of affairs. These were: Reformation, which released man's faith from the clutches of a dominating and static Church. Renaissance, which liberated man's mind and in his quest for knowledge man gradually learnt to depend on reason, sense perception and scientific thinking. The Ptolemaic cosmology was shattered -by the, Copernican astronomy, according to which the earth could no longer be considered the centre of the cosmos, but as one celestial body among many, it revolved around the sun and as for its position in the universe, it was merely an insignificant speak. So man was not under

the constant Gaze of God as such. Then followed Darwin's theory that man had descended from apes or had biologically evolved from animals.

Iqbal feels that this formulation of the view of evolution in Europe (unlike the one advanced in the world of Islam which brought into being Rumi's tremendous enthusiasm for the biological future of man), had led to the belief that there existed no scientific basis for the idea that the present rich complexity of human endowment would ever be materially exceeded. On this Iqbal comments: "That is how the modern man's secret despair hides itself behind the screen of scientific terminology". (*Reconstruction*. p. 148).

However Iqbal realized that all these events collectively made man conscious that he had to depend solely on himself and this led to the awakening, of man. He gained confidence through his philosophies of criticism and naturalism. He felt that his further lay exclusively in his control over the forces of nature. Thereafter the Industrial Revolution started changing the face of Europe, and with the French Revolution came the concepts of liberty, equality and fraternity. It was in fact this awakening which led to the rise and growth of materialism, and the disappearance of religion from the collective life of the people.

Man learnt to produce energy through coal and steam. Thus cheap energy and labour were used for running factories and mills. Europe manufactured so many goods that in the history of mankind this had never been achieved before.

For the sale of these goods markets were required. The search for markets and more raw material led to colonialism and imperialism. Thus in Europe a market society was created, and the standard of life of an average man improved. Through the emphasis on freedom of trade autocratic powers of monarchs were curtailed, and capitalist democracies were established on the basis of territorial nationalism.

In Europe these events engendered the formation of a new mentality and a new freedom. But the new man who came into being in this process, demanded absolute freedom. Absolute freedom meant ruthless trampling over the rights of others. Therefore, Modern Man with all his dedication to and respect for human rights, maintained double standards. Broadly speaking, human society was divided into exploiters and exploited.

The competition and jealousy among the exploiter— robber nations of Europe eventually led to the First World War on the one hand and the establishment of atheistic socialism or communism in Russia on the other.

However the struggle of Modern Man for supremacy over the others continued and resulted in the Second World War. But Do lesson was learnt by man from these two wars of mass destruction of human life and property.

The race for the manufacture and production of fatal arms did not stop. According to the figures provided by Dr. Hans Blix upto 1985 the member-states of the Nuclear Club possessed 50,000 nuclear devices with an explosive yield of 1000 Heroshima bombs. In other words, according to him, there was 4 tons TNT explosive available for the destruction of each and every human being in this world, and this was the position in 1985.

How are the I.D.Cs sustaining their prosperous position or what is the secret of their material power? It is the production and use of energy. The position is that the population in the I.D.Cs is 27% of the population of the whole world whereas they consume 80% of the energy produced in the world. The population of the U.S.A is only 6% of the world population but it consumes 36% of energy. As for the U.D.Cs, they constitute 73% of the world population And the energy used by them is only 20%.

The U.D.Cs aspire to become like the I.D.Cs and the model of man before them is the Western Modern Man. But the I.D.Cs maintain their economic and technological hegemony over them by imposing a system of economics based on loans. If the U.D.Cs increase the prices of raw material, the I.D Cs increase the prices of technology or finished products. This results in global inflation which is not as destructive for the I.D.Cs as it is for the poor U.D.Cs. Thus the material prosperity of Modern Man is founded and is being maintained on this discrimination between man and man.

However, despite the oil crisis, global inflation, and population explosion in the U.D.Cs, the movement in those countries for economic freedom and technological emancipation is gaining momentum.

Meanwhile a depressing picture of the future is presented in the annual reports of the Club of Rome. According to these reports by approximately middle of the 21st century the world's food resources may be completely exhausted. According to their estimate hunger is likely to strike first in certain

parts of Africa and thereafter Bangladesh, India, Pakistan etc. if the growth rate of the population remains the same as it is at present, and this situation is likely to arise in the first quarter of the 21st century. The reports also state that the conventional means of obtaining energy or the world's power resources may be completely exhausted before the end of 21st century.

In the light of these reports, some liberal thinkers of the West are recommending that the political leaders of the I.D.Cs should review their definition of "development". According to some of them the Utopias of early twentieth century i.e., communism and capitalism, as economic orders, have both failed to get rid of under-development on global scale, and that at present no one possesses any such economic system which can generate will and courage in man to improve his living conditions in the future.

Eminent Marxist philosophers like Herbert Marcos and Maximilian Robel had been extremely critical of the Soviet policy of only concentrating on breaking the Western industrial and technological supremacy instead of using the Soviet revolution for the economic betterment of man. In a way, these thinkers had forestalled the eventual break-down of the Soviet economy if such a policy was to be pursued.

World politics at present are not development oriented but are power oriented. If power is dependent on economic stability, then the emergence and continuance of the U.S.A as a unipolar power, would involve the length of time it can remain in the field as such. But the unipolar power cannot live in the ivory tower when 73% population of the world is afflicted with global inflation, population explosion and under-development. According to the liberal thinkers the world today is standing on the edge of a global economic crisis which can lead to total destruction of mankind. Consequently these thinkers are suggesting the establishment of a new international economic order based on ethics and morality. According to them such artificial discriminations like blacks and whites, capitalists and communists, developed and under-developed etc. had been harmful for the natural advancement of humanity. Tofler suggests that the U.N. should establish an international body composed of economic experts belonging to both I.D. Cs as well as U.D.Cs, in order to control the threatened global economic crisis or to keep an eye on the negative trends of world economy. Tofler is of the view that in order to save humanity from all future economic crises, it is necessary to think in terms of unity of human beings rather than nations. According to

him the world's population should be planned according to its resources and that these resources should be fully exploited. All men are under-developed in the sense that for their economic survival they have to depend on one another. Therefore the future survival of man is possible only if he becomes mature by his bitter experiences of the past and learns to respect his fellow men. (*The Future Shock/ The Ecco Spasm Report*).

It is interesting to note that the views which are being expressed by the liberal thinkers of today about the future of humanity are more or less the same which, had been expressed by Iqbal in his writings more than fifty years ago. Iqbal rejected territorial nationalism as a basis of human unity even when he was a student in Europe. In the Allahabad Address (1930) which contained his suggestion of the formation of a Muslim state in the North-West of the Indian subcontinent, he had stated: "Luther.... did not realize that in the Peculiar conditions which obtained in Europe, his revolt (against the church organizations would eventually mean the complete displacement of the universal ethics of Jesus by the growth of a plurality of national and hence narrower systems of ethics. Thus the upshot of the intellectual movement initiated by.... Rousseau and Luther was the break up of the one into mutually ill-adjusted many, (and) the transformation of a human into a national outlook... The result is a set of mutually ill-adjusted states dominated by interests not human but national, And these mutually ill-adjusted states after trampling over the morals and convictions of Christianity, are today feeling the need of a federated Europe, i.e., the need of a unity which Christian church-organization originally gave them but which, instead of reconstructing it in the light of Christ's mission of human brotherhood, they considered it fit to destroy under the inspiration of Luther." (*Speeches and Statements* ed. by A. R. Tariq pp. 4-6).

In a poem tided "Mecca and Geneva" included in his *Zarb-e Kalim*, he points out that in this age nations seem to be mixing freely with one another, although the principle of human unity remains hidden from the discerning eye. This is so because the aim of Western diplomacy is to divide humanity into nations, whereas the mission of Islam is to unify human beings into one fraternity. Respecting this matter Mecca sent a message to the city of Geneva: Are you content to be a scat of the League of Nations or would you prefer to be the centre of United Humanity?

In a statement recorded a couple of months before his death in 1938, Iqbal pointed out: "The modern age prides itself on its progress in knowledge and its matchless scientific developments. No doubt, the pride is justified .... But inspire of all these developments, tyranny of imperialism struts abroad, covering its face in the masks of (capitalist) democracy, (territorial) nationalism, communism, fascism and heaven knows what else besides. Under these masks, in every comer of the earth, the spirit of freedom and the dignity of man are being trampled underfoot in a way of which not even the darkest period of human history presents a parallel. The so called statesmen to whom government had entrusted leadership have proved demons of bloodshed, tyranny and oppression. The rulers whose duty it was to promote higher humanity, to prevent man's oppression of man and to elevate the moral and intellectual level of mankind, have in their hunger for dominion...., shed the blood of millions and reduced millions to servitude simply in order to pander to the greed and avarice of their own particular groups. After subjugating ... weaker peoples... they sowed (the seeds of) divisions among them that the should shed one another's blood and go to sleep under the opiate of serfdom, so that the leech of imperialism might go on sucking their blood without interruption.... The governments which are not themselves engaged in this drama of fire and blood are sucking the blood of the weaker peoples economically. It is as if the day of doom had come upon the earth, in which no voice of human sympathy or fellowship is audible. The world's thinkers are stricken dumb. Is this going to be the end of all this progress and evolution of civilization?.... Remember, man can be maintained on this earth only by honoring mankind, and this world will remain a battleground of ferocious beasts of prey unless and until the educational (and moral) forces of the whole world are directed to inculcate in man respect for mankind.... National unity too is not a very durable force. Only one unity is dependable and that unity is the brotherhood of man, which is above race, nationality, colour or language So long as men do not demonstrate by their actions that they believe that the whole world is the family of God, so long as distinctions of race, colour and geographical nationalities are not wiped out completely, they will never be able to lead happy and contented life, and the beautiful ideals of liberty, equality and fraternity will never materialize". (*Speeches and Statements*, ed. by A. R. Tariq, pp. 226-228).

Now we can consider the question: What are Iqbal's views on the future of religion? It has already been pointed out that, broadly speaking, religion is required for the moral uplift of man. However a counter-argument may be advanced that morality or ethics being a branch of philosophy, why should it be founded on religion? This line of reasoning would naturally take us to the discussion as to what is the difference between philosophy and religion?

According to Iqbal, philosophy is an independent inquiry based on reason for the comprehension of Reality, and religion, in the broader or higher sense, is also a search for Reality. But its foundations are laid on experience which is other than the normal level of experience. If one claims that the normal level of experience is the only level of knowledge-yielding experience, then religion need not attract anyone's attention. But Iqbal argues, if the universe, as it is normally perceived, is only an intellectual construction, and there are other levels of human experience capable of being systematized by other orders of time and space; and in which concept and analysis do not play the same part as they do in the case of our normal experience, then the matter is different. It is precisely for this reason that a person who relies on religious experience, the knowledge gained by him through his experience is essentially personal and incommunicable. However, Iqbal maintains, that the fact that the knowledge gained through religious experience is incommunicable does not imply that the pursuit made by the man of religion has been futile.

Modern man is secular in the sense that he is indifferent towards religion. The reason is that according to his evaluation religion is in conflict with science, and since the findings of science are rationally demonstrable, religion is reduced to mere superstition providing solace to man in his stages of ignorance, but of no authentic relevance in the present and the future. Iqbal does not agree with this conclusion. In his view Reality has outer as well as inner dimensions. Science is concerned with the external behavior of Reality whereas the domain of religion is to discover the meanings of Reality in reference to its inner nature. In this respect both scientific and religious processes run parallel to each other. While commenting on these processes Iqbal states: 'A careful study of the nature and purpose of these really complementary processes shows that both of them are directed to the purification of experience in their respective spheres" (*Reconstruction*, p. 155).

Iqbal divides religious life into three periods. In the first period religious life appears as a form of discipline which is voluntarily accepted by an individual or a group of people as unconditional commands without any rational understanding of the ultimate purpose of those commands. It is only in this sense that religion is based on dogma, ritual or some kind of priesthood. In the second period revelation is reconciled with reason and discipline is followed by a rational understanding of the discipline and the ultimate source of its authority. It is at this stage that religion may claim itself to be the sole possessor of the Truth and becomes exclusive or relative and engenders hatred of one religion against the other as well as within a religion itself when one mode of interpretation comes into conflict with another. In the their period religious life develops the ambition to come into direct contact with the Ultimate Reality and it is at this stage that religion becomes a matter of personal assimilation of life and power.

For Iqbal this stage of religious life is what he calls higher religion. He states: "It is, then, in the sense of this last phase in the development of religious life that I use the word religion.... Religion in this sense is known by the unfortunate name of Mysticism, which is supposed to be a life-denying, fact-avoiding attitude of mind directly opposed to the radically empirical outlook of our times. Yet higher religion, which is only a search for a larger life, is essentially experience and recognized the necessity of experience as its foundation long before science learnt to do so" (*Reconstruction*, p. 143-144).

The question may well be asked that if in the context of higher religion, God is the centre of all religions and the Truth is absolute, then why the diversity or relativity of religions? The answer provided by Martin Lings is that God has sent different religions especially suited to the needs, requirements and characteristics of the different groups of humanity in different temporal cycles. But if these groups of men, in the course of human history, have persecuted one another on account of religious differences, then Providence cannot be held responsible for it. However, despite winning converts through persuasion or slaughter of human beings in the name of religion, many religions which have fought against or competed with one another in the past history, have survived and now dominate different parts of the world. It is therefore necessary that irrespective of the position adopted by the partisan religious authorities we must carefully examine what, according to Iqbal, higher religion teaches about the nature of God.

The modern Western civilization has dealt with the problem of religion through encouraging the development of two types of secularism. One type of secularism is base on indifference towards religion and this is the attitude adopted by Modern Man in the capitalist democracies: The other type is based on the suppression of religion and for a number of years this policy has been followed by the socialist countries. But the experience tells us that indifference towards religion automatically leads to the demand for that variety of "freedom" which Albert Camus calls "tyranny" or "waywardness". On the other hand, the recent developments in the U.S.S.R and the other socialist countries indicate that atheism cannot be successfully imposed from outside on a people, and whenever such an attempt is made, it is bound to fail. Thus it is evident that the existing types of secularism have not been able to resolve the problem.

It is perhaps in this background that Iqbal rejected the methodologies of territorial nationalism, capitalism, atheistic socialism as well as religious conservatism as drawing upon the psychological forces of hatred, suspicion and resentment which tend to impoverish the soul of man closing up his hidden sources of spiritual energy. He points out: "Surely the present moment is one of great crisis in the history of modern culture. The modern world stands in need of biological renewal. And religion, which in its higher manifestations is neither dogma, nor priesthood, nor ritual, can alone ethically prepare the modern man for the burden of the great responsibility which the advancement of modern science necessarily involves, and restore to him that attitude of faith which makes him capable of winning a personality here and retaining it hereafter. It is only by rising to a fresh vision of his origin and future, his whence and whither, that man will eventually triumph over a society motivated by an inhuman competition, and a civilization which has lost its spiritual unity by its inner conflict of religious and political values". (*Reconstruction*, p. 149).

From the above analysis it appears that the solution of the problem lies in the adoption of the policy not of indifference towards or suppression of religion, but of respecting all religions. Every religion in the narrower sense consists of dogma, ritual and some form of priesthood. Ibis aspect of religion is exclusive or relative to the people who adhere to it and it is only in this context that the international community is multi-religious. Unfortunately some of the religious communities in the world today are passing through a

phase of conservatism or fundamentalism which has let loose the forces of hatred and resentment. Whatever be the reasons for this affliction, let us hope that the phase is temporary and shall pass away. However according to Iqbal, each great religion, at the higher level contains the absolute Truth. Therefore it is necessary for every religious community to discover and project the higher level of its religion. It is at this level that religion can restore to humanity its spiritual unity and ethically prepare man to respect his fellow-men.

Iqbal does not consider Islam as. a religion in the ancient sense of the word. For him, he explains: "It is an attitude- an attitude, that is to say, of Freedom, and even of defiance to the Universe. It is really a protest against the entire outlook of the ancient world. Briefly, it is the discovery of Man'. (*Stray Reflections*, p. 193).

It is interesting to note how Iqbal deduces the principles of higher religion from the verses of the Qur'an and bases his political idealism on them. The citing of a few examples may be useful.

In sura XXH verse 40 it is stated: "If God had not raised a group (i.e., Muslims) to ward off the others from aggression, churches, synagogues, oratories and mosques, where God is worshipped most, would have been destroyed". Broadening the interpretation of this verse so as to include all the religious minorities (and not only the people of the Book) in a Muslim state, he proclaims in the Allahabad Address: "A community which is inspired by feelings of ill-will towards other communities, is low and ignoble. I entertain the highest respect for the customs, laws, religious and social institutions of other communities. Nay, it is my duty according to the teaching of the Qur'an, even to defend their places of worship, if need be". (*Speeches and Statements,* ed. by A. R. Tariq, p. 10).

For Iqbal "*Tawhid*" (Unity of God), as a working idea, stands for equality, solidarity and freedom of man. Therefore the state, from the Islamic standpoint, is essentially an effort to transform these ideal principles into space-time forces. (*Reconstruction*, pp. 122-123). According to him the republican form of government is consistent with the spirit of Islam. In fact he is convinced that the ultimate object of Islam is the establishment of a "spiritual democracy".

On which specific verses of the Qur'an Iqbal could have possibly relied in support of this thesis? Let us examine the relevant verses.

In sura XL verse 78 while addressing the Holy Prophet, God say: "Verily We have sent messengers before thee. About some of them have We told thee, and about some have We not told thee". The self-evident meanings of the verse are that God has not only sent those prophets whose names are known to the Semitic religions (Judaism, Christianity and Islam), but also other messengers had been sent by Him bearing the tidings of numerous other modes of the Religion of Truth.

The second relevant piece in this connection is sura V verse 69 in which it is stated: "Verily the Faithful (Muslims) and the Jews and the Sabians and the Christians, whoso believeth in God and the Last, Day and doeth good deeds, no fear shall come upon them neither shall they grieve". As for the expression "Sabians" there is no general agreement as to which religion is referred to. However, as is indicated in the verse it is that category of religions which are based on a natural idea of God, of accountability and which emphasize on the doing of good deeds. Thus according to the Qur'an, everyone who believes in God, eventual accountability and who does good deeds need not fear as no grief shall come upon him.

The third is sura V verse 48 in which God addressing human beings declares: "For each of you We have appointed a law and a way. And if God had willed He would have made you one (religious) community. But (He hath willed it otherwise) that He may put you to the test in what He has given you. So vie with one another in good works. Unto God will ye be brought back, and He will inform you about that wherein ye differed". If God had only sent one religion to a world of widely differing aptitudes, it would not have been a fair test for all. Therefore He has sent many different religions and in this Quranic verse He expects human beings to enter into competition with one another only in doing good deeds and nothing else. It appears that it was in the light of such verses of the Qur'an that Iqbal desired the Muslims of today to evolve and establish a "spiritual democracy".

He maintains: "Humanity needs three things today— a spiritual interpretation of the universe, spiritual emancipation of the individual and basic principles of a universal import directing the evolution of human society— on a spiritual basis. Modern Europe has, no doubt, built idealistic

systems on these lines, but experience shows that truth revealed through pure reason— is incapable of bringing that fire of living conviction which personal revelation alone can bring. This is the reason why pure thought has so little influenced men, while religion has always elevated individuals and transformed whole societies With him (i.e. the Muslim) the spiritual basis of life is a matter of conviction for which even the least enlightened man among us can easily lay down his life; and in view of the basic idea of Islam that there can be no further revelation binding on man, we ought to be. Spiritually one of the most emancipated peoples on earth. Early Muslims emerging out of the spiritual slavery of pre-Islamic Asia were not in a position to realize the true significance of this basic idea. Let the Muslim of today appreciate his position, reconstruct his social life in the light of ultimate principles, and evolve, out of the hitherto partially revealed purpose of Islam, that spiritual democracy which is the ultimate aim of Islam". (*Reconstruction*, p. 142).

The conclusion is that if for the survival of humanity it is necessary for man to respect his fellow-men, in the same way it is necessary for him to learn to respect religions other than his own, It is only through the adoption of this moral and spiritual approach that, borrowing Iqbal's phrase, man may rise to a fresh vision of his future.

HIDDEN KHUDI: A CO-WORKER WITH GOD

AN ESSAY ON THE CONCEPT OF INDIVIDUALITY IN THE WRITING OF MUHAMMAD IQBAL

Dr. Thomas Stemmer

"In an over-organized society the individual is altogether crushed out of existence. He gains the whole wealth of social thought around him and loses his own soul."

(Muhammad Iqbal[1])

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SLOW INTRODUCTION

Ever since the script has been invented the art of writing is confronted with the eminent question: Why? Why do we write about great thinkers? Most certainly because they have something helpful to say. There is something *universal* in what they think and therefore it is appropriate to pick up their ideas and subject them to the flashlights of reason, intuition, scientific study, research, discussion, poetry, kitchentable conversations, artwork and – more generally speaking – presentation for the benifit of others. A great thinker is a universal thinker. Everywhere scholars, artists or *hommes de lettres* are able to refer themselves to them in order to get the best out of those ideas.

Muhammad Iqbal (1877 – 1938) is a universal thinker. He has something to say for people of different creeds, world views or frameworks of mind. Since everybody is *one of a kind*, or in other words: an individual, Iqbal's ideas concerning individualism are certainly the first and foremost object of study. Ideas of individuality appeal to the individual just *because* he is an individual. It is a matter of the *heart*. So what has Muhammad Iqbal to say about individuality? Does he present a concept? A system? An idea? It is well worth

[1] Iqbal, Muhammad, *The Reconstruction of Religious Thought in Islam*, Edited and annotated by M. Saeed Sheikh, 4th edition, April 1999, p. 120. (All quotes in this essay refer to this edition of Iqbal's "*Reconstruction*".

the effort to try to understand what this great poet-philosopher has to offer about a very important topic such as this.

So how should we approach the concept of individuality in the work of Muhammad Iqbal? After all, the topic is so close to life that one should take care. Nobody wants to behave like an elephant in a china shop.

I propose here to approach the topic of a concept of individuality in Iqbal's writings by *slowly* moving forward, moving in circles around it and finally get a glimpse of it through some kind of thoroughly looking at what is being presented. It is more of a slow phenomenological approach than mere understanding. It reflects an aspect of contemplation or gentle cogitating. Or to put it into simpler, more straightforward terms: Maybe it is helpful to move toward the topic in the way a **cat** deals with the world. A wise statement about cats by the US-American author William S. Burroughs might serve here as a definition for my further proceeding on these few modest pages I call an "essay':

> **The cat does not offer services. The cat offers itself. Of course he wants care and shelter. You don't buy love for nothing. Like all pure creatures, cats are practical. To understand an ancient question, bring it into present time.**[2]

That is the approach I shall try to follow. Maybe it is not the effort to explain Muhammad Iqbal's ideas but to surround and to locate them on an inner spiritual map.

So the first thing I did after the intital idea to write down this essay was to contact the son of Muhammad Iqbal, Dr. Javid Iqbal, and to ask him about it all. I quoted a fine article written by him[3] in which he further defines the way in which Muhammad Iqbal was a philosopher, or rather a *poet-philosopher*. I was happy to receive a good answer that helped me finding my way:[4]

> *When I say that Iqbal had no philosophic system to offer, and that therefore he was not, strictly speaking, a philosopher; I mean that he definitely was interested*

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[2] Burroughs, William S., *The Cat Inside*, Harmondsworth, 2002, p. 10.

[3] Iqbal, Dr. Javid, "Religious Philosophy of Muhammad Iqbal", *Iqbal Review*, Journal of the Iqbal Academy Pakistan, Vol. 43, No 2, April 2002, pp. 1–11.

[4] Dr. Javid Iqbal in a letter to the author, February 17, 2004.

in some aspects of philosophy but he was not a philosopher in the academic sense like, for instance, Kant or Hegel. In other words, he had a world view or a philosophy of his own like Goethe, Nietzsche, Shakespeare, Rumi, Ghalib and Bedil. Thus as a poet-philosopher, his philosophy of individualism (Khudi), in the singular and collective sense, is like the philosophy of any of the above mentioned poet-philosophers. These poet-philosophers did not have any philosophical system to present in the form of philosophical systems of Hegel, Kant, Leibnitz etc. If you keep this distinction in mind, you would be on the 'right" track.

This stetement led me to the expression I coined as *Hidden Khudi*, and which I chose as a title for this essay. Very definitely, there is the idea, the importance of individuality or individualism but it is not systematically presented to the readers. This is not a misfortune but a chance. It allows the reader to think on his own: The reader is, after all, an individual person, too.

All around the world the importance of man being an individual is stressed, be it in a political, philosophical or artistic context. Within the framework of religion or spirituality the situation could be described almost entirely in terms of individuality: **I** am here. Somebody must have created me. What do **I** have to do in order to understand? So what did Iqbal say? First and foremost, he described man as an individual using the terms *Khudi* or *Ego*. Consequently God appears in his writings as the *Ultimate Ego*. According to Iqbal, it was God's or the Ultimate Ego's will that man exists *as an Ego*. Iqbal said: [5]

Thus the element of guidance and directive control in the ego's activity clearly shows that the ego is a free personal causality. He shares in the life and freedom of the Ultimate Ego who, by permitting the emergence of a finite ego, capable of private initiative, has limited this freedom of His own free will.

Annemarie Schimmel wrote: [6]

Iqbal has one favorite symbol for this Ego: that of the pearl which is, according to oriental imagination, created by a rain drop falling into the shell and forming there a jewel. In this symbol lies a silent opposition against the conventional

[5] Iqbal, Muhammad, *Reconstruction*, pp. 86–87.

[6] Schimmel, Annemarie, *Gabriel's Wing. A Study into the Religious Ideas of Sir Muhammad Iqbal*, 3rd edition, Lahore, 2000, p. 103

mystical symbol of the drop which is lost in the vast ocean of the Godhead: the self should be preserved – though living in the ocean of divine being, it must concentrate on his own reserves and become more precious through this concentration –

In this way one might easily understand the words from the *Javīd Nāma* that Muhammad Iqbal himself placed at the end of his philosophical masterpiece *The Reconstruction of Religious Thought in Islam*:[7]

Art thou in the stage of 'life' , 'death' or 'death-in-life' ?

Invoke the aid of three witnesses to verify thy 'Station'.

The first witness is thine own consciousness –

See thyself, then, with thine own light.

The second witness is the consciousness of another ego –

See thyself, then, with the light of an ego other than thee.

The third witness is God's consciousness –

See thyself, then, with God's light...

If thou standest unshaken in fornt of this light,

Consider thyself as living and eternal as He!

That man only is real who dares –

Dares to see God face to face!

What is 'Ascension' ? Only a search for a witness

Who may finally confirm thy reality –

A witness whose confirmation alone makes thee eternal.

No one can stand unshaken in His presence;

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[7] Iqbal, Muhammad, *Reconstruction*, p. 157.

And he who can, verily, he is pure gold.

Art thou a mere particle of dust?

Tighten the knot of thy ego;

And hold fast to thy tiny being!

How glorious to burnish one's ego

And to test this lustre in the presence of the Sun!

Re-chisel, then, thine ancient frame;

And build up anew being.

Such being is real being;

Or else thy ego is a mere ring of smoke!

From this bold, strong and uplifting idea of *Self* or *Ego* or *Khudi*, we can go on in this little essay. Yet we shall see in the pages to come that this bold image of the Self in Muhammad Iqbal's writing is always related to the Divine and not an end in itself. So the Khudi is not to be described in words such as those I recently found in a *poem/noise – collage* by the Austrian poet Ernst Jandl, which seem to be a little bit silly, but made me laugh, though (of course they were purposely set this way in bad English by Ernst Jandl himself as a means of artistic expression): [8]

tell me nelly if it's true

i am i and you are you

gravely nelly shook her head

i am i and you are dead

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[8] Jandl, Ernst, *Das Röcheln der Mona Lisa. Gedichte*, Szenen, Prosa, Berlin, 1990, p. 175. I know, mentioning this part of a poem by Ernst Jandl (1925–2000) seems slightly childish, but being childish is the way every one of us started out in life long ago. So for a **slow introduction** to an essay this might be appropriate (I hope)...

I guess this introduction was slow enough to enable my essay to go on smoothly. There are still a few comments to be made and many of Iqbal's valuable thoughts and insights to be understood.

A CONCEPT ???

One might ask: Does Iqbal's notion of Self or *Khudi* constitute a concept in the philosophical meaning of the word? Is there a concept to be found between – let's say, his *Asrār-i Khudī* (where Iqbal stresses the value of Self, Ego or *Khudi*) and the somewhat softer *Ramūz-i bēkhudī* (which seems to "soften" the "blow" of the the *Asrār*)? Could it be found by diving into the philosophical depths of his *Reconstruction of Religious Thought in Islam*?

Probably not. Iqbal never sat down to put fine discriminations into a consistent system of the notion *Khudi*.

The word concept is derived from the Latin language (*conceptus*) and means a mental gathering in advance. It is *an idea or mental picture of a group or class of objects formed by combining all their aspects.*[9]

Either Iqbal had not done this (**because he was a poet**, possessing a direct approach to ideas beyond the limitations of a concept) or he had it as a premise but failed to name it (**because he was a philosopher** who does not always have to explain premises). To complicate things, Iqbal was in reality both: **a poet-philosopher**. And in addition to that, there were certain traits to be found in him, which Annemarie Schimmel tried to define by using the word **prophetic**. She subtitled one of her books on Muhammad Iqbal "**prophetic poet and philosopher".**[10] I suppose everybody would expect a prophetic poet-philosopher to be beyond narrow concepts.

So let us state here that there is no philosophical concept of *Khudi* in the strict sense of the word. But let us go on.

KHUDI, EGO, SELF: USING WORDS & DENOMINATIONS

An old saying goes like this: We are the children of the light but the victims of semantics. Every intellectual of any consequence has to face this

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[9] See *The Concise Oxford Dictionary of Current English*, Ninth edition, Reprint with Corrections, edited by Della Thompson, Oxford, 1998, p. 275.

[10] See the title of the book by Annemarie Schimmel, *Muhammad Iqbal. Prophetischer Poet und Philosoph*, München, 1989

fact. Certainly nobody wants to be victimized. So maybe Iqbal did not only set up a systematic evaluation of Self or Ego or *Khudi* because it was difficult, but also because he wanted to **remain *intellectually on the road* in respect to this most important problem**?! There have been efforts to combine some sort of religious life and thinking with some sort of on the road attitude in world history before[11]; so Muhammad Iqbal would not have been the first to try this way out at all... So he did not solve the problem of the value of individuality in a traditional way, but found the clarification of this point beyond words by heavy, refreshing dynamism of thought. I believe, Muhammad Iqbal kept surrounding the reality of the individual human being and its power to act wisely, avoiding lasting definitions and narrow mind patterns. For the benifit of *us*, the readers or scholars (who want to exercise the same right of free thinking). A very selfless act, indeed.

Yes, Iqbal stresses the importance of being an individual but he consciously refuses to give 'orders' as given to children.

Dr. Javid Iqbal, the son of Muhammad Iqbal, seems to hint at this fact when he writes: [12]

> *Man' s destiny lies in constant creative activity. Iqbal is categorial when he asserts: When act performed is creative, / It' s virtuous, even if sinful.*

Muhammad Iqbal himself describes this dynamism in one of his poems in very beautiful, yet strong words:[13]

Life and Strife

> *(in reply to a poem of Heine)*
> *'Long years were mine' , said the sea-shattered cliff,*
> *'Yet never taught me what is this called **I**.'*

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[11] For example the religious efforts undertaken in this direction of a certain individual on-the-road-mysticism by authors and poets of the US-American *Beat Generation* during the 1950s and the 1960s, like for example *Jack Kerouac* or *Robert Lax* relating to Christianity or *Allen Ginsberg* and *Gary Snyder* relating to Buddhism or *Brion Gysin* and *William S. Burroughs* relating to some "home-made" mystical context.

[12] Iqbal, Dr. Javid, "Devil in the Triangle of Rumi, Goethe and Iqbal", in *Iqbal Review*, Journal of the Iqbal Academy Pakistan, Vol. 42, № 4, October 2001, p. 11.

[13] "Iqbal Muhammad: Life and Strife", translated into English by V. G. Kiernan, in *Poems from Iqbal*, Renderings in English with Comparative Urdu / Persian Text, Translated by V. G. Kiernan, 3rd edition, Lahore, 2003, p. 288.

A headlong-hurrying wave cried: 'Only if
I move I live, for if I halt I die'.

Prof. Fateh Muhammad Malik, who twice held the Iqbal Fellowship at the university of Heidelberg/Germany (from 1984 to 1988 and from1992 to 1996), coined the phrase *"The only sin is not to be creative!"* in one of his lectures. Very *Iqbalian* indeed. So Muhammad Iqbal rises above mere concepts of individuality by ignoring them in the name of individuality. It is a poetical means to an end. It does not mean just playing around with words for the sheer joy of confusion. A vision of individuality remains to be seen this way. It is serious.

In an article about the life and work of Muhammad Iqbal, the *Encyclopædia Britannica* puts it this way: [14]

> *Ultimately, the only satisfactory mode of active self-realization was the sacrifice of the self in the service of causes greater than the self.*

Muhammad Suheyl Umar finds the same trait in Iqbal in regard to his Wisdom Poetry. He writes:[15]

> *Finally, art, even the highest as in the case of sapiential poetry, is only the means to an end. It is a manner of 'seeing through a glass, darkly,' and although it is far better than not to see at all, the utility of every art must come to an end when vision is 'face to face'.*

With his in mind I shall quote some of Muhammad Iqbal's finest ideas on individuality, as found in his philosophical book *The Reconstruction of Religious Thought in Islam*:

> *The only effective power, therefore, that counteracts the forces of decay in a people is the rearing of self-concentrated individuals. Such individuals alone reveal the depth of life. They disclose new standards in the light of which we begin to see that our invironment is not wholly inviolable and requires revision*.[16]

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[14] *The New Encyclopædia Britannica*, *Micropædia*, Vol. 6, Ready Reference, 5th edition, Chicago, etc., 2002, p. 373.
[15] Umar, Muhammad Suheyl, *"That I may See and Tell"— Significance of Iqbal's Wisdom Poetry*", Iqbal Academy Brochure Series, № 2, Lahore, 2002, p. 15.
[16] Iqbal, Muhammad, *Reconstruction*, p. 120.

No doubt, the emrgence of egos, endowed with the power of spontaneous and hence unforeseeable action is, in a sense, a limitation on the freedom of the all-inclusive Ego. But this limitation is not externally imposed. It is born out of His own creative freedom whereby He has chosen finite egos to be participators of His life, power, and freedom.[17]

The nature of the ego is such that, in spite of its capacity to respond to other egos, it is self-centred and possesses a private circuit of individuality excluding all other egos than itself.[18]

Another important characteristic of the unity of the ego is its essential privacy which reveals the uniqueness of every ego.[19]

Napoleon is reported to have said: 'I am a thing, not a person'. This is one way in which unitive experience expresses itself. In the history of religious experience in Islam, which, according to the Prophet, consists in the 'creation of Divine attributes in man', this experience has found expression in such phrases as 'I am the creative truth' (Hallāj), 'I am Time' (Muhammad), 'I am the speaking Qu'rān' ('Alī), 'Glory to me' (Bā Yazīd). In the higher Sufism of Islam unitive experience is not the finite ego effacing its own identity by some sort of absorption into the Infinite Ego; it is rather the Infinite passing into the loving embrace of the finite.[20]

This last quote might serve as a bridge to the next chapter about Iqbal's idea of man being a co-worker with God, one of his major contributions to *universal* thinking.

CO-WORKER WITH GOD: EASTERN & WESTERN CONTRIBUTIONS TO MUHAMMAD IQBAL'S THINKING

So the notion of Self, Ego or *Khudi* is finally conceived as an attitude of the Self being a **Co-Worker with God**. Around the world, scholars are able to discover many fine or exciting definitions of individualism[21], but hardly anybody is speaking of man as a co-worker with God.[22]

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[17] *Ibid.*, pp. 63–64.
[18] *Ibid.*, p. 58.
[19] *Ibid.*, p. 79.
[20] *Ibid.*, pp. 87–88.
[21] Such as for example Ayn Rand's definition: *"Individualism regards man – every man – as as independent, sovereign entity who possesses an unalienable right to his own life, a right derived from his own*

It seems, however, that at the core of Iqbal' s non-systematical ideas about the importance of individualism, right in the middle of the picture of the individual being an individual and the individual giving selfless service, the notion of a co-worker with God combines all of Iqbal' s thinking in this area. It answers the questions "Is man a free individual" and "*Why and to what ends* is man an individual?"

Dr. Javid Iqbal, his son, writes:[23]

> *Iqbal through the constant strengthening of 'ego' expects man to become a co-worker or rather a counsellor of the Divine Being in creating a more perfect universe.*

So we can identify the idea of man being a co-worker with God as the innermost aspects of individualism in the writings of Muhammad Iqbal, but still we have to ask what exactly does he mean by that?

I suggest, that we should take an indirect approach by looking at all the individualist theories or world views that have (or might have) influenced Iqbal in getting to this point of the notion "co-worker with God."

There is quite a handful of first-class influences from the **East** as well as from the **West**. Iqbal— once again— proves himself to be *a universal individual thinker, a contribution to world culture.*

I envision Muhammad Iqbal, therefore, as some kind of a precious cup, able to gather and to further develop some of the best ideas of mankind.

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nature as a rational being. Individualism holds that a civilized society, or any form of association, cooperation or peaceful coexistence among men, can be achieved only on the basis of the recognition of individual rights – and that a group, as such, has no rights other than the individual rights of its members." (Rand, Ayn, *The Ayn Rand Lexicon. Objectivism from A to Z*, The Ayn Rand Library, Vol. VII, edited by Harry Binswanger, New York, 1986, p. 218.

[22] It is vaguely hinted at by some small religiuous groups within the Christian area or in some of the writings within the Radhaswami/Sant Mat/ Surat Shabda Yoga tradition (Sikh mysticism). Another religion, called Eckankar, puts more emphasis on this idea (and roughly to the same extent, some of the Eckankar offshoots). But all in all, the basic idea is not very much appreciated within the domain of religion, theology, religious science, philosophy of religion or spiritual thought and practice... In most other cases, a lot of *interpretation* has to be used in order to dig out this idea within the fascinationg world of religion(s). And sometimes, there is only a small gap between interpretation and *mis*interpretation.

[23] Iqbal, Dr. Javid, "Devil in the Triangle of Rumi, Goethe and Iqbal", in *Iqbal Review*, Journal of the Iqbal Academy Pakistan, Vol. 42, № 4, October 2001, p. 11.

First and foremost, there are **Eastern** influences on his co-worker with God/ individualist ideas. To be precise, since Iqbal was a Muslim, his first influences are clearly coming from the Qu'ran. He backs up his view of man as a free ego and God as the Ultimate Ego with quotations from the Holy Book of Muslims. Probably the most prominent verse he uses is Sura 24, verse 35, which *seem* to give a non-individualistic vision at first:[24]

> *God is the light of the Heavens and of the earth. His light is like a niche in which is a lamp – the lamp encased in a glass, - the glass, as it were, a star.*

But Iqbal goes on to analyze that this very verse strengthens the view of God as the Ultimate Ego. He states in chapter 3 of his "*Reconstruction*":[25]

> *No doubt, the opening sentence of the verse gives the impression of an escape from an individualistic conception of God. But when we follow the metaphor of light in the rest of the verse, it gives just the opposite impression. The developpement of the metaphor is meant rather to exclude the suggestion of a formless cosmic element by centralizing ht elight in a flame which is further individualized by its encasement in a glass likened onto a well-defined star. Personally, I think the description of God as light, in the revealed literature of Judaism, Christianity, and Islam, must now be interpreted differently. The teaching of modern physics is that the velocity of light cannot be exceeded and is the same for all observers whatever their own system of movement. Thus, in the world of change, light is the nearest approach to the Absolute. the metaphor of light as applied to God, therefore, must, in view of modern knwledge, be taken to suggest the Absoluteness of God and not his Omnipresence which easily lends itelf to a pantheistic interpretation.*

The other aspect of Iqbal' s individualism (Co-worker with God by selfless service) is mentiond by him in the same chapter of his "*Reconstruction*" where he uses the congregational prayer of the Muslims as a symbol. [26]

> *The real object of prayer, however, is better achieved when the act of prayer becomes congregational. The spirit of all true prayer is social. even the hermit abandons the society of man in the hope of finding, in a solitary abode, the fellowship of God. A congregation is an association of men who, animated by the same aspiration, concentrate themselves on a single object and open up their inner selves to the*

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[24] As quoted by Iqbal in the "*Reconstruction*", p. 51.
[25] Iqbal, Muhammad, *Reconstruction*, p. 51.
[26] Iqbal, Muhammad, *Reconstruction*, pp. 73–74.

working of a single impulse. It is a psychological truth that association multiplies the normal man's power of perception, deepens his emotion, and dynamizes his will to a dregree unknown to him in the privacy of his individuality. Indeed, regarded as a psychological phenomenon, prayer is still a mystery; for psychology has not yet discovered the laws relating to the enhancement of human sensibility in a state of association.....

Prayer, then, whether individual or associative, is an expression of man's inner yearning for a response in the awful silence of the universe. It is a unique process of discovery whereby the searching ego affirms itself in the very moment of self-negation, and thus discovers its own worth and justification as a dynamic factor in the life of the universe.

Another— possible— influence from the East might be recognized in his strict monism. As the renowned German author Hermann Hesse (born in the same year as Iqbal) wrote in his foreword to Annemarie Schimmel's translation of the *Jāvīdnāme*, there might be influences from Vedanta philosophy. Hesse wrote:[27]

A Muslim of Indian descent, trained spiritually by the Koran, by the Vedanta and by Persian-Arabic mysticism (...)

This very quote by Hermann Hesse leads us to Western influences on Iqbal. Hesse goes on to say:[28]

(...) but also strongly touched by the problems of Western philosophy and conversant with Bergson and Nietzsche, leads us in ascending spirals through the provinces of his cosmos.

Maybe the most prominent **Western** influence leading Muhammad Iqbal to his individualism and to the idea of a co-worker with God was the German philosopher Friedrich Nietzsche and the theory of *Superman*.

Is Iqbal' s free *Ego* the same as Nietzsche's *Superman*? Iqbal seems to be ambivalent about this point. He admires Nietzsche and at the same time he criticises him. Dr. Muhammad Maruf writes:[29]

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[27] As quoted in Annemarie Schimmel, "Germany and Iqbal", in Koehler, Wolfgang (ed.): *Muhammad Iqbal und die drei Reiche des Geistes. Muhammad Iqbal and the Three Realms of the Spirit.* Band 3 der Schriftenreihe des Deutsch-Pakistanischen Forums e. V., Hamburg, 1977, S. 45–60. Hermann Hesse' s foreword is quoted in an English translation on p. 59.

[28] *Ibid.*

To sum up, then, despite his appreciation of Nietzsche for his keen vision and burning heart, Iqbal subjects his philosophical system, especially his idea of the Superman, to criticism on the following scores:

1) *His materialistic interpretation of historical forces;*

2) *His misconceived notion of time which, according to him is circular;*

3) *His denial of self or khudi as a fact;*

4) *His denial of immortality and the Hereafter;*

5) *His mechanistic view of evolution which he conceived as an Eternal Recurrence;*

6) *His failure to comprehend the true significance of his own vision;*

and he apitomises Nietzsche's total failings in the lack of proper spiritual guidance and ascribes this to his intellectual progenitors like Kant and his Western traditions.

Dr. Nazir Qaiser adds:

> Unlike Nietzsche's superman who is an atheist, Iqbal's perfect man is God fearing and devoted religious man. This makes a fundamental difference. faith in God goes a long way to develop human personality. Against Nietzsche's superman who has no brighter future, Iqbal's perfect man earns resurrection.[30]

And Annemarie Schimmel puts it this way: [31]

> *What he aims at, is not man as measure of all things but as a being that grows the more perfect the closer his connection with God is, it is man neither as an atheistic superman who replaces a God ' who has died' , nor as the Perfect Man in the sense that he is but a visible aspect of God with whom he is essentially one – but man as realizing the wonderful paradox of freedom in servantship.*

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[29] Maruf, Dr. Muhammad, "Iqbal's Criticism of Nietzsche", in *Iqbal Review*, Journal of the Iqbal Academy Pakistan, Vol. 23, № 3 (Iqbal Number), October 1982, pp. 37–44 (The quote is on pp. 43–44).

[30] Qaiser, Dr. Nazir, *Iqbal and the Western Philosophers* (A Comparative Study), Lahore, 2001, p. 54.

[31] Schimmel, Annemarie, *Gabriel's Wing. A Study into the Religious Ideas of Sir Muhammad Iqbal*, 3rd edition, Lahore, 2000, p. 382.

Surely enough, Nietzsche is not the only Western influence on Iqbal concerning individualism but most probably the strongest influence. Therefore I have quoted only thinkers who compare Iqbal and Nietzsche. In order to highlight the idea of the human individual being a co-worker with God. I feel I should add an observation by Prof. Niaz Erfan who compared Iqbal and Sartre. He writes:[32]

> *Thus he (= Sartre) writes in* Being and Nothingness *'Either man is wholly dtermined... or else man is wholly free. Sartre casts his vote in favour of total indetermination. Man, according to him, is indetermined to the extent that his volition is conditioned neither by heredity nor by environment, nor by any goal, nor by traditional values. (...) as many critics have observed, this sort of freedom is in reality its own negation.*
>
> *To reach somewhere a man must not only be free to move but must also have a goal or purpose. In other words, he is determined by the goal he pursues.(...)*
>
> *According to him (= Iqbal), '... the element of guidance and directive control in the ego's activity clearly shows that the ego is a free personal causality.'*

Maybe— *and only maybe*— this chapter has given a good impression of how Iqbal's view of individuality of man as a co-worker with God stands at the crossroads of **East and West**. If so, good.

RESPECT FOR A GREAT THINKER

And if not?

We can follow certain traces of Iqbal's thinking, where he— most probably— got some traits of his thinking from. But these are only quotes. Iqbal quotes Nietzsche and Goethe and the Qu'ran and Rumi, etc. Distinct lines of thinking run through philosophy, poetry and religion; this is *the sunny side up*. But have all quotes *really* contributed to thinking itself? Or do poets and philosophers think and the quotes are just added? Maybe thinking produces itself out of thin air?[33] I feel I am unable to give an answer. Let' s say:

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[32] Erfan, Prof. Niaz, *Iqbal – Existentialism and other Articles*, Lahore, 1997, pp. 58–59.

[33] That reminds me of an old German saying that poets make their living *out of love and thin air ("aus Luft und Liebe")*...

Muhammad Iqbal was an extraordinary thinker and poet, whose eminent ideas about man being an individual (in the sense of being a co-worker with God) give freedom to readers. In one way or another he stands between East and West and people from Orient and Occident can profit from his work. It is like this: Iqbal— *as a universal thinker*— is standing on a high mountain developping lofty, liberating thoughts about the importance of individualism. Up there on the mountaintop Oriental and Occidental breezes can be felt. Iqbal was able to use even the slightest breeze and to turn it into a vital thought.

And after all, what is more important than man's individuality and his status as a co-worker with God? It is interesting that the **eagle**[34], the bird that stands for individual freedom and has its nest some place high up in the mountains, appears so often in Iqbal's poetry. In the *Payām-i Mashriq* the eagle gives advice to its youngster:[35]

Walking on rocks sharpens the claws.
You are one of the yellow-eyed of the desert.
You are noble of nature like the sīmurgh.
You are noble-born, one who, on combat day,
Draws out the pupil of the tiger's eye.
Your flight has the majesty of angels,
In your veins is the blood of the kāfūrī falcon.
Under the humpbacked, revolving sky
Eat what you catch, be it soft or hard.
Do not take your food from another hand,
Be good and take the advice of the good.

Iqbal stands alone. The mark of a great thinker as well as of a great poet.

♦♦♦♦♦

[34] For a good impression of the Iqbalian eagle, it is maybe the best idea to watch and enjoy the wonderful and uplifting paintings and drawings of **Aslam Kamal**, the official painter of the poetry of Iqbal! In many pictures, the eagle, the proud bird, can be seen!

[35] As quoted in Mir, Mustansir, "The Eagle in Iqbal's Poetry", in *Iqbal Review*, Journal of the Iqbal Academy Pakistan, Vol. 42, № 2, April 2001, pp. 27–37 (The quote is on pp. 34–35)

THE CREATIVE AND DIRECTIVE FUNCTION OF THE HUMAN EGO

Iqbal's Qur'anic Hermeneutics

Dr. Ayesha Leghari Saeed

One of the great contributions of Allama Mohammad Iqbal to modern Muslim thought is his definitive concept of *khudi* or human personality as derived from an inspired understanding of the Qur'an. He uses the word *khudi* in Urdu and Persian to denote the ego, the self or individuality. His aim is to raise awareness regarding the special and prestigious position granted to human beings in the universe. Iqbal gives a dynamic interpretation to the concept of human personality viewed from the Qur'anic perspective. He quotes from the Qur'an in order to highlight his belief in the unique nature of the relationship between human beings and God: "After his Lord chose him Adam for Himself and turned towards him, and guided him."[36]

The word 'Adam' is use by Iqbal as a generic term to mean humanity as a whole. The above words of the Qur'an express the special, unique and intimate relationship between God and human beings. Iqbal's concept of *khudi* emphasizes this relationship between God and human beings as the 'chosen of God.' Iqbal's aim is to reiterates the integral Judaic Christian Islamic concept that human beings have been chosen by God for a special purpose. The Qur'an makes it very clear that the sole purpose for the creation of human beings is to worship none but God. Iqbal reveals the inner meaning of this concept when he emphasizes that in order to worship God in the true sense of the word, human beings need to reach the stage of *khalifatullah* or 'representatives of God on earth.'

It is good to be God's vicegerent on earth,

And to be a ruler over the elements.[37]

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[36] Qur'an, 20:122, quoted by Allama Mohammad Iqbal in, *The Reconstruction of Religious Thought in Islam* (Lahore: Sh. Muhammad Ashraf, 1989), 95.

[37] Allama Muhammad Iqbal, *Rumuz-i-Bekhudi*. Translation by A. J. Arberry, *The Mysteries of Selflessness* (London: John Murray, 1953) 49.

Human beings can only achieve this position if they constantly strive for the growth of their egos or selves (*khudi*). Strengthening of the ego takes place when the ego is not embroiled in the pursuit of pleasure or deterred by the painful and challenging experiences of life.

Life offers a scope of ego-activity, and death is the first test of the synthetic activity of the ego. There are no pleasure-giving or pain-giving acts; there are only ego-sustaining and ego-dissolving acts. It is the deed that prepares the ego for dissolution, or disciplines him for a future career. [38]

It is through the performance of dynamic and creative deeds that the growth of the personality takes place. In fact Iqbal gives evidence directly from the Qur'an reiterating his revolutionary belief that not just the survival, but also the continuous growth of the personality can take place after death, only through the performance of "ego-sustaining deeds." The verse of the Qur'an, which he chooses to elaborate this belief, is as follows: "By the soul and He who hath balanced it, and hath shown it the ways of wickedness and piety, blessed is he who hath made it grow and undone is he who hath corrupted it."[39]

Iqbal emphasizes the Qur'anic statement that lays stress on the responsibility which human being have towards themselves, their Lord and the creation around them. "And it is He who has made you His representative on the Earth, and hath raised some of you above others by various grades, that he may prove you by His gifts."[40]

Despite all the weaknesses, a human being has been gifted with a nature, a consciousness and a soul that can enable him/her to become God's greatest creation i.e. the 'representative of God on Earth.' Iqbal writes in his *Javid Namah*:

The brilliance of this handful of dust [man] will exceed that of the angels.

Through the guidance of his destiny's star, the earth will turn into heaven.

He, whose mind is reared by constant adventures,

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[38] Iqbal, *Reconstruction,* 95.
[39] Qur'an, 91:710.
[40] Qur'an, 6:165.

Will rise above the whirlpool of the blue skies.[41]

Iqbal believes that the 'representative of God on Earth' is one who has developed his personality to such an extent that it maintains it's uniqueness, strength, independence and immortality despite coming into direct contact with the 'Infinite Ego,' meaning God. He explains the Qur'anic verse "Verily there is none in the heavens and in the Earth but shall approach the God of Mercy as a servant. He hath taken note of them and remembered them with exact numbering: *and each of them shall come to Him on the day of Resurrection as a single individual*."[42]

It is with the irreplaceable singleness of his individuality that the finite ego will approach the infinite ego to see for himself the consequence of past action and to judge the possibility of his future… The 'unceasing reward' of man consists in his gradual growth in self-possession, in uniqueness, and intensity of his activity as an ego.[43]

In the Higher Sufism of Islam unitive experience is not the finite ego effacing its own identity by some sort of absorption into the Infinite Ego; it is rather the Infinite passing into the loving embrace of the finite.[44]

The personality of such an individual is developed through correct action and ego-strengthening deeds to such an extent that when he/she comes in direct contact with the Highest Personality, his/her personality is not effaced. In fact it is the 'Infinite Ego,' which finds expression and symbolic representation within this personality, therefore rendering it immortal and infinite.

Iqbal believes that growth of the human personality takes place as a result of the use of will power. Human beings have the power to choose between right and wrong and forge a path towards whatever goals they have set for themselves. Each and every soul will have to face its own resurrection, and no one will be able to bear another's burden. In his lecture on 'The Human Ego- His Freedom and Immortality,' Iqbal states,

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[41] Allama Muhammad Iqbal, *Javaid Namah*, Translated by A. J. Arberry (London: Allen & Unwin, 1966) 10.
[42] Qur'an, 93-95.
[43] Iqbal, *Reconstruction*, 117.
[44] *Ibid*, 88.

The Qur'an in its simple, forceful manner emphasizes the individuality and uniqueness of man, and has, I think, a definite view of his destiny as a unity of life. It is in consequence of this view of man as a unique individuality, which makes it impossible for one individual to bear the burden of another, and entitles him only to what is due to his own personal effort...[45]

Iqbal's belief regarding *khudi* includes the integral concept that a human being is the trustee of a free personality. "Verily we proposed to the heavens, and to the Earth, and to the mountains to receive the "trust", but they refused the burden and they feared to receive it. Man undertook to bear it, but has proved unjust, senseless."[46]

Iqbal quotes the Qur'an to highlight the freedom of the human personality, which accepted the "trust" placed upon it by God. The mountains, the earth and the heavens refused to take up this challenge but human beings, being inherently aware of their true potential took up this "trust". The question that Iqbal keeps asking us is: Have we taken up this challenge? Have we taken up this trust that raises our status to the highest of creation through a new birth of the spirit? He writes in his *Javid Namah*:

O good man! You came into this world through birth.

You can also leap out of it through another birth and can snap the strings that bind you.

But this new birth is not a purely physical phenomenon,

And a man of vision knows

That the first birth was obligatory, while this second one is through your own efforts.[47]

There is another Qur'anic verse which Iqbal quotes in order to elaborate the meaning of this "trust" that humans accepted at their own peril: "By the soul and He who hath balanced it, and hath shown to it the ways of

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[45] Iqbal, *Reconstruction*, 76.
[46] Qur'an, 33:72, quoted by Iqbal in ibid, 88.
[47] Iqbal, *Javaid Namah*, Translated by A. J. Arberry, 10.

wickedness and piety, blessed is he who hath made it grow and undone is he who hath corrupted it.[48]

Human beings accepted the challenge of this "trust" to become conscious of their own true nature, which has its roots in the Divine Life. Therefore they chose to take up the potential of becoming conscious participants in the creative unfolding of their own personalities. Human beings can raise their states of awareness from an animal-like existence to heightened spiritual states that have no limits. Human beings can make the soul grow and Iqbal uses the following verses of the Qur'an to explain how to "make the soul grow and save it from corruption."[49] "Blessed be He in Whose hand is the Kingdom! And over all things is He potent, who has created death and life to test which of you is the best in point of deed; and He is the Mighty and Forgiving."[50]

Iqbal says that it is through actions and deeds that reveal a respect for oneself and for other human beings that the ego is prepared for dissolution or for future growth and evolution. The immortality that has been promised in the scriptures is gained through personal physical and spiritual effort that allows for the unleashing of the various divine qualities embedded within the human spirit.

The principle of the ego sustaining deed is respect for the ego in myself as well as others. Personal immortality, then, is not ours as of right; it is to be achieved through personal effort. Man is only a candidate for it.[51]

Iqbal believes that human being have the potential for creative growth. Growth takes place through actions, deeds and personal effort. He is against the pessimistic doctrine of Materialism, which supposes that man's end takes place at death. For Iqbal "...death, if present action has sufficiently fortified the ego against the shock that physical dissolution brings, is only a passage to what the Qur'an describes as *Barzakh*."[52]

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[48] Qur'an, 91:710 quoted by Iqbal, *Reconstruction*, 95.
[49] See above.
[50] Qur'an, 67: 12 quoted by Iqbal, *Reconstruction*, 95.
[51] Iqbal, *Reconstruction*, 95.
[52] *Ibid.*

The *barzakh* is a state of consciousness which experiences space and time differently from how they are experienced in this present spacio-temporal order. It is the isthmus that connects this realm of physical reality with the realm of the spirit. The realm of the spirit being so pure and powerful, that access to it is only possible through the intermediate realm of *barzakh*. The *barzakh* allows for the spiritual realm and the physical realm to find a meeting place where the qualities of both realms are integrated and amalgamated, as in the realm of dreams and the angelic realm. According to Iqbal, *barzakh* is not supposed to be experienced in a state of passivity. Instead it is supposed to be experienced as an active state of consciousness, which allows the ego to encounter, understand and interact with other levels of reality without losing its individuality. The time spent between death and resurrection is therefore a time spent in this intermediate realm of reality called the *barzakh,* where a strengthened ego does not face dissolution when faced with powerful forces from the *barzakhi* reality.

Resurrection, according to Iqbal, is nothing more than an ego's own self-assessment of its own past actions in the face of a comprehensive understanding of the actual and volitional potential for growth that it enjoyed while it was clothed in this earthly existence. The ego, therefore, experiences resurrection not as an external event but an internal self-evaluation; a resurrection of its own self from the ashes of its own past experience and the seeds that it sowed for its future growth.

Iqbal believes in the possibility of the ego's growth even after death.[53] He quotes the following verse of the Qur'an to substantiate this belief: "What! When dead and turned to dust, shall we rise again? Remote is such a return. Now know We what the earth consumeth of them and with Us is a book in which account is kept."[54]

The Qur'an has again and again reiterated the message that the end of human life is not death of the physical body. To Iqbal, the above message suggests that the nature of individuality is such that it is maintained even after the disintegration of the body, as we know it. Although we cannot gain any 'insight' into the nature of the 'second creation' i.e. life after death of the physical body, but the Qur'an clearly teaches that it is the nature of the

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[53] Qur'an, 91:710.

[54] Qur'an, 50:3-5 quoted by Iqbal, *Reconstruction*, 98.

human individuality to remain distinct and separate. It is due to its individual character that it experiences resurrection and punishment or reward according to what it deserves through its deeds, before death. Iqbal writes:

Philosophically speaking, therefore, we cannot go further than this that in view of the past history of man it is highly improbable that his career should come to an end with the dissolution of his body.[55]

In order to grasp Iqbal's understanding of the concepts of hell and heaven and the growth of the human individuality after death, the following passage has been quoted from his seminal lecture on 'The Human Ego- His Freedom and Immortality". It is important to keep in mind that Iqbal came to these conclusions after an exhausting analysis of the concepts of hell and heaven as are elucidated in the vast realms of Islamic Philosophy, the Qur'an and *Sunnah*. Iqbal believes that heaven and hell are not some physical locations outside the human ego but are states of the inner human consciousness. "Hell, in the words of the Quran, is 'God's kindled fire which mounts over the hearts' (37:41-49)— the painful realization of one's failure as a man. Heaven is the joy of triumph over the forces of disintegration."[56] Iqbal does not conceive of Hell literally as a "pit of everlasting torture,"[57] imposed by a vengeful God. Instead he understands it to be a place where an ego devoid of sensitivity to God's Grace is kindled into a state from which he/she cannot but help respond to God's Power and Glory. Heaven, on the other hand is conceived as a state where the ego becomes not a passive but an active participant in the creative process.

And the recipient of Divine illumination is not merely a passive recipient. Every act of a free ego creates a new situation, and thus offers further opportunities of creative unfolding.[58]

The creative unfolding of the human ego through a clear understanding of the doctrine of personal immortality is at the heart of Iqbal's concept of *khudi*.

The Creative and Directive Function of the Human Ego

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[55] Iqbal, *Resurrection*, 98.
[56] *Ibid.*
[57] *Ibid.*
[58] *Ibid.*

Allama Mohammad Iqbal delved into the realms of spirituality, philosophy and psychology to elucidate his concept of the creative and directive function of the human ego. After giving direct evidence from the Qur'an regarding the possibility of the ego's growth even after the event of death, he went on to explain the nature of the human ego and how the movement and growth of the ego towards its 'higher self' is possible through the directive function embedded within its very structure.

Iqbal believes that "Inner experience is the ego at work."[59] We can conceptualise or feel the ego at work in the very act of "perceiving, judging and willing."[60] Iqbal describes the life of the ego as kind of "tension" which is due to the invasion of the ego in the environment and the environment in turn permeating the ego. According to him the ego does not have a life separated from this mutual relationship between the individual and the environment, instead, it is intricately connected to it as a directive energy and is formed and disciplined by its own experience.[61] He quotes the Qur'an to sustain his argument: "And they ask thee of the soul. Say: the soul proceedeth from my Lord's (*Rabbi) amr* (Directive Energy), but of 'knowledge only a little is given to you.""[62] In order to clarify the distinction between *amar* and *khalq* Iqbal resorts to the Qur'anic distinction of these two concepts. The English language may not have a separate word to clarify the distinction in God's relationship with his creation and God's relationship with the human soul, but Arabic supplies us with these separate relationships. Iqbal writes:

It has two words *khalq* and *amr* to express the two ways in which the creative activity of God reveals itself to us. *Khalq* is creation *amr* is direction. As the Quran says: "To Him belong creation and direction. (7:54)[63]

Therefore the real nature of the soul, its essence is directive as it proceeds from the *amr* or the Directive energy of God. Another word in Arabic used in the above quoted verse of the Qur'an, which emphasizes this unique relationship between God and the human ego, is *Rabbi* (My Lord).

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[59] *Ibid,* 82.
[60] *Ibid.*
[61] *Ibid.*
[62] Qur'an, 17:85, quoted by Iqbal, *ibid.*
[63] Iqbal, *Reconstruction*, 82.

This term is supposed to highlight the intimate level of the relationship between human beings and God. According to Iqbal, it is meant to clarify the individual, specific nature of the soul with all its variations and multiple facets, which balance out into a unique whole and which hold a separate and distinct relationship with God.

The relationship with God and *khalq* or the rest of creation, is different and is based on God being the Creator and the creation being his subjects devoid of directive power. It is only and only human beings whose souls proceed from their Lords' Directive energy and therefore, however insignificant, they do have a share in God's creative power. The Qur'an informs that human beings have been given only a little knowledge of the creative power inherent within themselves. Iqbal's intention is to raise awareness that despite the fact that only a little knowledge is granted to human beings regarding the mysteries of the human soul, yet the fact that the soul proceeds from God's creative command gives human beings a powerful creative edge over the rest of creation.

Iqbal considered personality not as a thing but as an act.[64] He wrote that, "My experience is only a series of acts, mutually referring to one another, and held together by the unity of a directive purpose."[65] He lay great emphasis to action and activity rather than passivity, and He believed that Muslim suffered greatly because they did not recognize the necessity for ceaseless endeavour, ceaseless struggle in order to face the challenges of life in a creative ongoing manner. He believed that Muslims were not aware of their true nature – which is: "The soul proceedeth from my Lord's *Amr* (Directive Energy)."[66]

If the soul comes directly from God's *amr*, it contains within itself that very quality to direct itself towards the highest spiritual goals. Iqbal's philosophy revolves around his intrinsic belief in human freedom and creativity.[67] It is through the God given, unique gift of will power i.e. the power to choose from many paths open to the soul, that human beings are

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[64] *Ibid.*

[65] *Ibid.*

[66] Qur'an, 17: 85.

[67] For further details on Iqbal's central doctrine regarding human freedom and creativity see Latif Hussain Kazmi's article, "Iqbal and Sartre on Human Freedom and Creativity," *Iqbal Review* 41/2 (Lahore: Iqbal Academy, 2000) 43-70.

given a position that is superior to that of the rest of creation. If the soul chooses to direct its energies only towards material ends then that is what it achieves at the cost of the spirit. If the soul chooses to neglect the body and only concentrate on the spirit, even that is possible but, the Islamic ideal as understood by Iqbal is, when the soul uses its directive purpose; its will-power to forge a path for the betterment both of the body and the spirit. It makes, shapes sculpts both the inner and the outer environment in a harmonious, beautiful manner through constant goal setting and constant action. He has the potential to direct his soul and moves his body toward higher evolutionary goals.[68] This is how the individual becomes a conscious participant in the process of evolution taking place within the various realms of reality.

Iqbal critically analyses the theory of Descartes and Spinoza that the soul and its organism are distinct, independent of each other. Iqbal, unlike Descartes and Spinoza, is inclined to think that the postulate of matter having an independent existence is highly dubious. He states that even if we assume that the soul and body are two independent entities and the changes of both run on parallel lines, due to some pre-ordained harmony, as Leibniz believed, this would reduce the soul to a "merely passive" witness to the happenings of the body. On the other hand if we believe them to affect each other, then it becomes difficult if not impossible (to show exactly how, where and when) the soul interacts with the body and vice versa. Thus Iqbal criticizes both the theories of parallelism and interaction.[69]

Iqbal is opposed to the theory of soul being separate from the body. He believes that the human ego is a single unity, which acts as a whole. "It is impossible to draw a line of cleavage between the share of the body and that

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[68] Please note here that the use of the word 'evolution' is not drawn from Darwinianism, instead it is derived from the Bergsonian concept of 'creative evolution,' which signifies the growth of the soul towards its higher spiritual self. For more details regarding the influence of Henri Bergson's philosophy of 'creative evolution' on Iqbal, read: "Iqbal, Pragmatism and Allied Movements," in Dr. Muhammad Maruf, *Iqbal and His Contemporary Religious Thought* (Lahore: Iqbal Academy Pakistan, 1987) 145-153.

[69] Iqbal, *Reconstruction*, 84. For further details regarding how Iqbal's philosophy differs from that of Spinoza and Descartes see Bashir Ahmed Dar's, "Spinoza: A Great Western Pantheist," *Iqbal* 1/3 (Bazm-e-Iqbal, 1953): 56.

of the mind in this act."[70] Iqbal quotes the following lines from Rumi's famous *Mathnawi*

Wine became intoxicated with us, not we with it

The body came into being from us, not we from it.[71]

Iqbal's belief in the unity of the spirit and matter is supported by the importance he gave to the theory of Creative Evolution or Emergent Evolution.[72] According to this theory the Ultimate Ego manifests itself through the rising evolution of life from its lowest forms of matter to the highest evolutionary form i.e. the spiritually most advanced human personality. He says, "Reality is, therefore, essentially spirit"[73] yet he qualifies this belief by mentioning that there are degrees of reality reflecting degrees of spirit.

In *The Reconstruction of Religious Thought in Islam*, Iqbal states very clearly that the evolutionary cycle of life demonstrates that, initially, the physical degree of reality dominates the mental, but eventually the mental starts to grow in such a way that it rises, "to a position of complete independence...[74] He states: "The Ultimate Ego that makes the emergent emerge is immanent in Nature, and is described by the Qur'an, as 'the First and the Last' the Visible and the Invisible."[75] Here Iqbal is pointing to his belief that the "Ultimate Ego" or God is deeply and mysteriously connected to all degrees of reality and it is God who uses His creative command to ensure that there is an upward march in the evolutionary scale from the point of the lowest order of existence to that of the highest order. Human beings have been given a unique role because they are the only beings in creation that have a direct and active role to play in strengthening their own egos or

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[70] Iqbal*, Reconstruction*, 84.

[71] Jalaluddin Rumi, *Mathnawi*, Translation by Reynold .A. Nicholson, *The Mathnawi of Jallaluddin Rumi* (Lahore: Islamic Book Service, 1989) verse 1, 1812.

[72] See Bashir Ahmed Dar's, "Iqbal and Bergson," *Iqbal and Post-Kantian Voluntarism* (Lahore: Bazm-I-Iqbal, 2000, 2nd ed.) 176-252.

[73] Iqbal, *Reconstruction*, 57.

[74] *Ibid,* 85.

[75] Qur'an, I57:3, quoted by Iqbal in ibid.

individualities so that they can conscious take part in, as Iqbal says, the "rising note of egohood"[76] in the various realms of reality.

Throughout the entire gamut of being runs the gradually rising note of egohood untill it reaches its perfection in man. That is why the Qur'an declares the Ultimate Ego to be nearer to man than his own neck-vein[77].....Only that is, strictly speaking real which is directly conscious of its own reality. The degree of reality varies with the degree of feeling of egohood.... Man, therefore, in whom ego has reached its relative perfection, occupies a genuine place in the heart of Divine creative energy, and thus possesses a much higher degree of reality than things around him. Of all the creations of God he alone is capable of consciously participating in the creative life of his Maker.[78]

As an outstanding spokesman for contemporary philosophic thought in Islam, Iqbal was convinced of the importance of creativity and creative endeavour in all branches of knowledge ranging from philosophy to science and even jurisprudence. He was keenly aware of the necessity for a renewed, invigorating and action-oriented philosophy that could rouse the Muslims from their age old, mentally and morally debilitating state. Iqbal's view of the Ultimate Reality being ever active and ever creative is in accordance with his dynamic philosophy. God is constantly adding to and changing a universe, which is unfinished. God is both purpose and will. Allah is the Ultimate Ego and He has created egos in ascending order. Human beings are the vicegerents of God on earth. As vicegerents and reflections of the Ultimate Ego, human beings contain infinite possibilities through their power of will and action. The free will granted to human beings is to be used creatively in order to fight the evil and disintegrating force of the universe. Any action, thought or deed that weakens the integrity of the ego contributes to its disintegration and eventual dissolution. The aim for the directive and creative function of the human ego is to strengthen the ego to such an extent that human beings become co-creators and co-workers with God Himself, involved in the creative unfolding of the universe around them.

Destroy whatever does not suit you,

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[76] Iqbal, *Reconstruction*, 57-58.
[77] Qur'an, 50:15.
[78] Iqbal, *Reconstruction*, 57-58.

Create a new world out of yourself.
A free man feels unhappy,
To live in a world of others.[79]

[79] Iqbal, *Javaid Namah*, Translated by A. J. Arberry, 225.

METAPHYSICS RE-INSTATED

Prof. Dr. Mohammed Maruf

I

The first systematic rejection of Metaphysics as a branch of knowledge came from Immanuel Kant in his famous *Critique of Pure Reason* (1781)[80] wherein he based his rejection on his critical analysis of the Pure Reason. It was in "The Transcendental Dialectic" Book II that he subjected to scrutiny the Pure Reason and concluded that Transcendental Psychology Transcendental Cosmology, and Pure Theology are impossible to comprehend, because there is no experience to occasion them and corroborate them[81]. He also made a distinction between (a) *Phenomenon*, *Noumenon*[82] and (b) *Sensible Intuition* and *Intellectual Intuition*[83]. Of the latter intuition he says that the intellectual, which is not that which we possess, and of which we cannot comprehend even the possibility[84] and this leads him to the conclusion that man cannot have the knowledge of the *Noumenon,* which is comprehensible through Intellectual Intuition only. Kant, however, has been largely misunderstood, because what he has denied the possibility of on the basis of his presuppositions in the field of Pure Reason, he has reaffirmed in his *Critique of Practical Reason* [85], where God the Immorality of the Soul and the freedom positively considered as Practical Postulates.[86] In fact, Kant has accepted these Postulates to support his Moral Ideal or *Summum Bonum,* which is a Composite End.

Kant was followed by Soren Kierkegaard (1813 - 1855) who was averse to all system building and was against that Professors would be teaching his thought in the Universities. His two books *Philosophical Fragments* (1844) and *Concluding Unscientific Postscript* (1846) 'present as directly and methodically as can be expected the philosophical thinking of a man whose method is

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[80] Eng. Tr. Norman K. Smith, (London: Mcmillan, 1963.
[81] Ibid, pp. 162-63
[82] Ibid, pp. 266-67.
[83] Ibid, p. 268
[84] Ibid.
[85] Eng. Tr. T. K. Abbott, (London: Longman Green, 1957).
[86] Ibid, pp. 229-30.

indirect and whose philosophy is not a system'.[87] But, despite his protest, the Movement he originated culminated in elaborate and highly complicated systems of Martin Heidegger's *Existence and Being* (1949)[88] and J. P. Sartre's *Being and Nothingness* (1957)[89] which are not easy to follow even for a serious student of philosophy. Another reaction against philosophical systems, especially Hegelianism, which originated from an interaction between the Cambridge School of Analysis and the Vienna Circle in the early 1930's, was named Logical Positivism[90] (At least the term appeared in 1930's though with some qualifications). However, its application in the fields of morality, metaphysics and religion came as late as 1936 when A. J. Ayer first published his classical work *Language, Truth and Logic* (London)[91] and *The Foundation of Empirical Knowledge* (1940).[92] The basis of this school was the famous "Verifiability Principle"[93] which enables its votaries to make an incisive distinction between the "meaningful" and "meaningless" or "nonsense" statements.[94] However, A. J. Ayer was compelled to admit Indirect Verification[95] also which rendered the whole criterion so vast and "loose" that many of the moral, religious and metaphysical utterances could pass for "meaningful" statements. What led him to this concession was that the original Principle was too rigid to pass even for truth some of the most established hypotheses of science, e.g., the axis of the earth and its inclination at 45 degrees. However, in fairness to Logical Positivists, they could very ably project the case for empiricism. But the question arises what necessitated the emergence of these reactions against traditional metaphysical systems? Why a need for them was felt which purported to demolish time-honoured philosophical systems like that of Aristotle, Hegel, and so on. A close examination of these reactions will show that they are reactions against systems like Hegelianism, which has its inspiration from, and may be deemed as a logical consequence of, the philosophical systems of Plato, who was

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87 Blackham H. J., *Six Existentialist Thinkers,* (London: Routlege & Kegan Pul, 1961), p. 2.
88 Eng. Tr. D. Scott, RF.C. Hull & A. Crick, (London, 1949).
89 Eng. Tr. E. Barns, (London, 1957).
90 Passmore J., *A Hundred Years of Philosophy,* (Penguin, 1980)' pp. 368-69.
91 (London: Victor Golloncz, 1946).
92 (London: Macmillan, 1940).
93 This Principle was first formulated by F. Waismann in 1930. See Passmore, ibid, pp. 368-69. A. J. Ayer, then, developed it in his famous treatise *Language, Truth and Logic* (1946).
94 Ayer, ibid., p. 3.
95 Ibid.

rightly called the Father of Idealism in the West: it was Platonic system which, during all these centuries, developed and culminated in Hegel's Absolutism, followed by his followers. These reactions have nothing to do with the First Philosophy of Aristotle, whose philosophical system cannot properly be dubbed as Idealism, though there, no doubt, is an element of Idealism in his system.[96] The modem philosophers are often misled into thinking that their movement is a reaction against Aristotle's 'First Philosophy', and in this short paper my main object is to refute this misconstruction. Thus, I have decided to devote Second Section of my paper to as true an exposition of Aristotle's metaphysical philosophy as is possible.

Before taking it up, it is necessary to discuss another movement called Linguistic Analysis or Philosophy, which is 'An approach to philosophy that holds that a careful study of how language is actually used, taught, and developed in everyday discourse can illuminate, or even transform or dissolve, time-honoured philosophical problems. These problems are seen as arising, often if not invariably, because thinkers, misled by superficial grammatical similarities or their own fondness for uniformity, have ignored relevant differences in the functions of terms and hence misused them...'[97] The Linguistic Philosophy was popularized by Wittgenstein[98] and then developed by Carnap (*The Logical Syntax of Language*),[99] J. L. Austin,[100] and Gilbert Ryle[101] (*Plato's Progress,* 1966), etc. However, a close scrutiny of this philosophy will reveal that it originated in the West with Socrates who was the first to emphasize the need for defining terms precisely which are being used in the discourse and arguments to render thought crystal clear. Today, the Continental philosophy has developed into Post–Structuralism and Post-Modernism[102] of thinkers like Michel Foucault (1926-1984),[103] Ferdinand de

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96 See Aristotle's "Metaphysics" in *A New Aristotle Reader,* ed. J. L. Ackrill, (Oxford: Clarendon Press, 1987), pp. 255fI.
97 Flew A., (ed.), *A Dictionary of Philosophy* (Pan Books, 1982) pp. 188-89.
98 Ibid., p. 189.
99 Rudolf Carnap (1891-1970), a German positivist.
100 Flew, ibid., p. 189.
101 Ibid
102 West David, *An Introduction To Continental Philosophy,* (Polity Press, 1996), pp. 154 ff & 189ff.
103 Ibid, pp. 168-69.

Saussure (1857-1913)[104] Jacques Lacan (1901-1981)[105] and Jacques Derrida (1930-).[106] Foucault has tried to philosophize away 'the Subject';[107] Saussure has replaced the 'Signified' by the 'Signifier' and thus has turned knowledge into something superficial;[108] Lacan has reduced human "I" or Self to mere mirror-image which he has identified with "imago";[109] while Derrida puts up Post-Structuralism, as against Structuralism, which, he says, 'is a philosophy of Becoming rather than of Being; it is endlessly dynamic, allowing us no escape or apparent respite from the shifting play of meanings'.[110] The worst type of Philosophy in our times has been the feminist philosophy which bases its reasoning on the structural differences between male and female to prove inferiority of the latter.[111] Thus, they have demolished any permanence in human Self, thought and reality; they have done away with any stable 'referent'; in short, they have brought philosophy once again at the cross-roads.

II

What is my main object in this paper is to reinstate Aristotle's First Philosophy in its true paces, whom I deem as one of the miracles of God. Unfortunately, during all these centuries, his thought has been badly and largely distorted - a fact which dawned on me when I read his original text. Aristotle has been very clear and consistent in his exposition of his thought. In the Ethics, he makes a very fine distinction between art and science which stems from experience. He says 'that experience is knowledge of individuals, art of universals, and actions and productions are all concerned with the individual;...'[112] He cites the case of a physician who cures individuals; and if he knows the theory without experience, 'he will often fail to cure, for it is

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[104] Ibid, pp. 165-66.
[105] Richard Kearney & Mara Rainwater (ed.), *The Continental Philosophy Reader,* (Routlege: London & New York, 1996), p. 328..
[106] West, op. cit. p. 178.
[107] Ibid., p. 168ff.
[108] Ibid., p. 178.
[109] Kearney, op. cit., 330 ff.
[110] West, op. cit, p. 180
[111] *Robert Audi* (*Chief Editor), The Cambridge Dictionary of Philosophy, (Cambridge University Press,* 1999), *pp. 305-06.*
[112] Ackrill, op. cit., p. 256.

the individual that is to be cured'.[113] However, 'we think that knowledge and understanding belong to art rather than to experience, and we suppose artists to be wiser than men of experience (...); and this is because the former know the cause, but the latter do not, for the men of experience know that this is so, but do not know why,...'[114] According to Aristotle, 'the master-workers in each craft are more honourable and know in a truer sense and are wiser than the manual-workers, because they know the causes of the things that are done...'[115]

Again, Aristotle stresses that 'in general it is the sign of the man who knows, that he can teach, and therefore, we think art more truly knowledge than experience is; for artist can teach, men of mere experience cannot'.[116] Again, Aristotle adds, arts which 'were directed to the necessities of life' were regarded Inferior in respect of wisdom than those which are directed' to its recreation, the inventors of the latter were always regarded as wiser than the inventors of the former, because their branches of knowledge did not aim at utility'.[117] However, he assigns due importance to other branches of knowledge. He says, 'we do not regard any of the senses as wisdom; yet surely these give the most authoritative knowledge of particulars. But they do not tell us the 'why' of anything e.g., why fire is hot; they only say that it is hot'.[118] He adds, 'All the sciences, indeed, are more necessary than this, but none is better'.[119] Thus, Aristotle assigns due place to all the branches of knowledge, but for him the 'First Philosophy' is the most superior.

Aristotle holds that philosophy begins, and originally began, with wonder; 'And a man who is puzzled and wonders thinks himself ignorant (. . .); therefore they philosophized in order to escape from ignorance, evidently they were pursuing science in order to know, and not for any utilitarian end'.[120] He adds, the science 'which investigates causes is ... more capable of teaching, for the people who teach are those who tell the causes of each

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113 Ibid.
114 Ibid.
115 Ibid.
116 Ibid.
117 Ibid, pp. 256-57.
118 Ibid, p. 256.
119 Ibid, p. 259.
120 Ibid, p.259.

thing. And understanding and knowledge pursued for their own sake are found most in the knowledge of that which is most knowable;...; and the first principles and causes are most knowable; for by reason of these and from these all other things are known, but these are not known by means of the things subordinate to them'.[121] Thus, theoretical sciences are more of wisdom than the practical sciences, according to Aristotle. He goes on to hold 'theoretical kinds of knowledge to be more of the nature of wisdom than the productive. Clearly then wisdom is knowledge about certain causes and principles'.[122] Not only that the most exact science deals with the causes and first principles; again those 'which involve fewer principles are more exact than those which involve additional principles, e.g., arithmetic than geometry'.[123] This point is very important in modem science which amply bears it out. A student of physics knows well that originally physicists believed that there were four fundamental forms of energy; the gravitational energy, the electromagnetic energy, and the two forms of nuclear energy, the so-called weak and strong. Dr. Abdus Salam, the Nobel Laureate, and his team succeeded in reducing the electromagnetic energy and the weak form of nuclear energy to only one. He says, 'In our view, there should be no basic distinction between electricity and nuclear forces. We said they were simply identical'.[124] Their claim was confirmed by experiments conducted in the world-renowned laboratories in Geneva, U.S.A., and U.S.S.R. and Dr. Salam was conferred the Nobel Prize in 1979. This unified force is called the Electro weak force.[125] His and his team's final aim is to reduce all kinds of forces to one single force. This is nothing but reducing the number of 'First Principles' the need for which Aristotle stressed centuries ago.

It is generally believed that for Aristotle 'substance' was the study of the' First Philosophy'. He used a word in Greek language which has been translated into '*ousia*'. Later, this word was rendered into Latin by *substantia;* Cicero proposed the alternative *essentia,* which also won its way into

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121 Ibid.

122 Ibid, p. 257.

123 Ibid.

124 Ghani Dr Abdul, *Abdus Salam: A Nobel Laureate,* (Karachi: Maarif Printers, 1982)., p. 163.

125 Ibid, p. 164: 'The fact that we have been seeking for a unity among the seemingly disparate forces of nature, is part of our faith as physicists and of mine as a Muslim. And to be thus privileged to comprehend a part of Allah's design is a grace and a privilege for which I render humble thanks to Allah'.

philosophical discussion. The history of the word then became complicated by the usage of theologians'.[126] However, Aristotle used the word 'substance' for the 'individual' or subject in the logical sense; for other entities like genus and species he used the term *quasi-substance.*[127] Again, he says that 'There is a discipline which studies that which is *qua thing-that-is* and those things that hold good of this in its own right. That is not the same as any of what are called the special disciplines. For none of the others examines universally that which is *qua thing-that-is,* but all select some part of it and study what is accidental concerning that;... 'The discipline that deals with 'that which is *qua thing-that-is* is nothing but philosophy or, what Aristotle called, the First Philosophy'.[128] But the prerequisite for knowing this science is complete freedom and, he adds, 'as the man is free, we say, who exists for himself and not for another, so we pursue this as the only free science, for it alone exists for itself'.[129] However, he adds that 'the possession of it might be justly regarded as beyond human power; for in many ways human nature is in bondage;... ,[130]

According to Simonides "God alone can have this privilege"...' Aristotle, however, adds that this is the most divine science and is also most honourable'.[131] Commenting on Aristotle's concept of God A. H. Armstrong writes in his *An Introduction to Ancient Philosophy,* 'It is simply the logical culmination of the hierarchy of substances and the ultimate explanation of motion and change. But it is not a person or power exercising providence, ordering all things by its will. Still less is it a Creator. . .'[132] He adds, Aristotle's thought is not really God-centred, but Cosmos-centred'.[133]

Thus, our study of Aristotle's original thought on the 'First Philosophy' reveals why he placed it after physics, for he assigned due importance and authority to other disciplines, including those which are derived from senses,

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126 Allan D.J., *The Philosophy of Aristotle,* (London: Oxford Press, 1963) pp. 104-05.
127 Ibid, pp. 108-09.
128 Ackrill, op. cit., pp. 261-62.
129 Ibid,p. 259.
130 Ibid.
131 Ibid, p. 258.
132 Armstrong A. H., *An Introduction To Ancient Philosophy,* (London: Methuen UP., 1965), p. 90.
133 Ibid.

because 'surely these give the most authoritative knowledge of particulars;' though 'for him "the First Philosophy" is the most superior;' it deals with the first causes and the principles of things, and adds that 'those which involve fewer principles are more exact than those which involve additional principles,. . .'[134] However, what is generally neglected, though it is extremely important, is that' Aristotle assigns due importance to other sciences also when he says, "All the sciences, indeed, are more necessary than this, but none is better". Thus, he assigns due importance to all those disciplines which are pursued for some end or utility; he did not reject them as mere "opinions" or useless like Plato.

III

After having stated Aristotle's position the question arises how corruption occurred during all these centuries which aroused so much hue and cry against metaphysics? We have seen that Aristotle never used the term 'Metaphysics' for his 'First Philosophy'. 'It was apparently

Andronicus who gave the name *Metaphysics* to Aristotle's treatise on First Philosophy, because it was ranked after the *Physics* in his edition;...'[135] In fact, present day Metaphysics, which later on assumed the meaning of

'beyond physical,' had its origin in Platonic World of Ideas. Christian world drew its inspiration from Plato and the neo-Platonists, and tried to understand Christian dogmas in its light. In contrast to Plato's superlunary World of Ideas, the Churchmen like Albert of Bollstadt (1193- 1280), and St. Thomas Aquinas (1225 or 1227-1274) placed those Ideas or Forms in the Mind of God. St. Thomas, like Albert, agrees with Aristotle in conceiving Ideas, or Forms, or universals as immanent in the mind of God,...'[136] Again, John Duns Scotus (1274-1308) more emphatically says, 'Universals exist before *things,* as forms in the mind of God; in things, as their essence or general nature; and after things, as abstract concepts in our minds.'[137] So, this is how metaphysics began to be converted into theology and religious concepts like God, Hereafter, etc., came to be part of metaphysics, and became object of severe criticism at the hands of movements during the last

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134 Ackrill, op. cit., p. 257.
135 Allan, op. cit., p. 102.
136 Thill Y F., *A History of Philosophy,* (Allahabad: Central Book Dep., 1958), p. 229.
137 Ibid, p. 243.

two centuries, and unfortunately, it came to earn a bad name. But why modern thinkers became conscious of these problems about metaphysics and began to assail it from all possible quarters?

Prof. Ivor Leclerc, Prof. Emeritus of Philosophy, Emori University, Atlanta (U.S.A.) in his paper "The Issue of the Nature of Metaphysics" has taken much pains to trace the development of those trends which have tried to impugn metaphysical problems. In the first place, he writes, 'In the Hellenistic period, and indeed among Aristotle's immediate followers, the basic emphasis was put on the *ousia* which was held to be primary, namely the Divine That is, with this answer to the question of 'what is that which is in *this* sense,' metaphysics essentially became theology, i.e., the 'object' of metaphysics was God'.[138] This gave it an objectionable look for the scientific mind which refused to go beyond the 'physical.' The prefix 'meta' assumed a meaning during the Middle Ages which was not in accord with Aristotle's doctrine. 'Relevant here is', says Prof. Leclerc, 'that it was particularly this interpretation which in the eighteenth century came to be rejected'.[139]

The question arises how metaphysics fell into disrepute? The question whether or not metaphysics is a valid enterprise has faced us for the last two centuries and still is most prominently facing the philosophical community today, for I, somehow, believe that no metaphysics means no philosophy in its proper sense. 'This issue arose early in the nineteenth century as the outcome of the development of physics as a mechanics, that development which had initiated with Galilio and by the end of the seventeenth century had achieved a significant peak with Newton, and which reached its perfection by the end of the eighteenth century with Laplace.[140]

And with this started the drive to purge the science of mechanics of all philosophical and metaphysical concepts like force, cause, law, etc., and were replaced with quantitative concepts. The impact of science on philosophy was variously manifested and, as said before, the result was the emergence of positivistic trends in philosophy which took various forms, e.g., logical positivism, neo-positivism, empirico-criticism, analytical philosophy, and so

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138 Leclerc I., Sutherland S. & T.A. Roberts, *Religion, Reason and the Self,* (Cardiff University of Wales Press' 1989), p. 95.
139 Ibid.
140 Ibid, p. 912.

on. Another change which emerged in philosophy 'was the turning of philosophy to epistemology as fundamental. This movement of thought, in which the influence of Kant and Hume were prominent, has on the whole been decidedly anti-metaphysical, or at best not sympathetic to metaphysics.'[141] However, Aristotle had a great insight when he sounded a warning at that time that is so early, that 'mathematics has come to be the whole philosophy for modem thinkers, though they say that it should be studied for the sake of other things'.[142] This warning has come true today and, let me add that it has completely corrupted philosophy. As I said before, today philosophy is at the cross-roads as it has no anchor to stand upon, and I am afraid that we are moving towards "scientism"[143] which will be a death-blow to the true spirit of philosophy. It is high time for the people of philosophy to rise from their slumber and do their best for the revival of philosophy, which is not possible without a resuscitation of metaphysics in the sense in which Aristotle presented it about three thousand years ago.

IV

We should keep in mind that philosophy and science are two disparate human activities which one undergoes in his daily life. Science, as everyone knows, is descriptive and predictive, while philosophy is evaluative and critical (the two kinds of activities which each human being undertakes in his everyday life); and how these two diametrically different activities can be confounded with one another, I fail to understand. This, however, does not mean that they have nothing to do with one another, because the two activities often go hand -in -hand in most of the human intellectual endeavours As Iqbal says, 'They stem from the same root and compliment each other'[144]. However, unfortunately the two kinds of activities have been confounded and mixed up for over last two centuries-an attempt which will lead to a complete debacle in the two fields, for even science is sure to suffer in the long run. In one of the toughest interviews of my life I was asked if there was a place for philosophy in the world of unparalleled achievements of science, especially technology. I replied to this tricky question in the affirmative and said, 'When a philosopher collects his data and organizes

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141 Ibid, p. 92.
142 Smith J.A & Ross W.D., *The Works Of Aristotle,* (Oxford: Clarendon Press, 1908), p. 992a.
143 Flew A., op. cit., p. 298.
144 *Reconstruction,* p. 2.

them, he is in the realm of science; but when a scientist proceeds to draw conclusions from his data to arrive at general principles, he is in the realm of philosophy. The two forms of processes musty go hand-in-hand else there will be no knowledge in the proper sense.' Thus, the two activities go side by side, and both are inevitable. While talking of metaphysics, we should keep in mind that Aristotle never left the 'physical' behind to take a jump into the supraphysical realm as Plato did. As we have seen before, he assigned due importance to experience, and then tried to rise beyond, rather draw out of them, a universal study of the 'being' or 'thing-that-is'. Prof. Leclerc has endorsed it in the following words: '... characterizing Aristotle's own view of that field-which he himself referred to as *prote philosophia,* 'primary philosophy' - namely the set of issues and problems which are arrived at *meta, 'after' the study of the physical, arising out of that study, but going 'beyond' the physic* This field extends beyond that of the physical in not being concerned, as is the physical inquiry, with particular kind of things, but deals with all beings *(ta onta*), that is, it considers being universally (*katholou) qua* being *(he on*)'.[145] The criticism, on the contrary, applies to those attempts which left the physical or experienced totally behind and tried to sore into a world, a heavenly world, as was done by Plato and his followers down to the Absolutism of Hegel; they do fall within the purview of that criticism which has been brought against metaphysics— *meta* in the sense of 'beyond' the physical reality. It is these thinkers who have been building airy castles, which is, in my view, neither metaphysics nor science.

I conclude my discussion once again with very pertinent remarks of Prof. Leclerc who says, 'For what has come to be necessary today is an effective partnership of the natural sciences and metaphysics, since not only neither of these is as autonomous as has been believed for the last two centuries, but they are also mutually necessary to each other';[146] a need which Allama Iqbal emphasized over sixty years before Prof. Leclerc in his famous *Lectures*[147] and more emphatically in that magnum opus *Javed-Namah,* where

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[145] Leclerc, op. cit., p. 94.

[146] Ibid., p. 101.

[147] His Lecture entitled "The Conception of God and the Meaning of Prayer", p. 92 delivered at Hyderabad (India) on 15-01-1929 where he writes: 'Vision without power does bring moral elevation but cannot give a lasting culture. Power without vision tends to become destructive and inhuman. Both must combine for the spiritual expansion of humanity.

he says: '... Love-led can reason claim the Lord and reason-lit Love strikes firm roots. When integrated, these two draw the pattern of a different world'.[148] I believe that this is the only attitude which can help in the progress of knowledge; I mean comprehensive knowledge, in today's world. The philosophy today is again at the crossroads as it was at the hands of Sophists, and we seriously need another Socrates to define the terms, and another Aristotle to put philosophy on its true and proper footings in order to render it genuine once again - a discipline which is worth studying as an independent and genuine intellectual endeavour.

[148] *The Pilgrimage of Eternity, (Eng. Tr.)* S. Mahmood Ahmad of Iqbal's *Javaid-Namah, p.* 54.

ALLAMA IQBAL'S TRIBUTE TO SHAYKH AHMAD SIRHINDI: AN APPROACH

Dr. Abdur Rashid Bhat

Introduction

Shaykh Ahmad Sirhindi (1564-1624) and Allama Iqbal (1877-1938) are regarded as the two seminal personalities of Indian subcontinent. Both were deeply rooted in the Shari'ah knowledge, understood their times, its crisis and put forward their remedies to it in their own ways. Sirhindi belonged to late medieval times when the Muslim empire in India apparently seemed stable but religiously it was witnessing a serious decline under Akbar's innovation of *'Din-i-illahi'* the situation was inherited by his successor, Jahangir and the Shaykh Ahmad Sirhindi through his keen and constant efforts of religious reformation ultimately affected a positive change in the society. Allama Iqbal belonged to the twentieth century milieu when India was under the British rule and its natives in general and the Muslims in particular were witnessing a heavy onslaught of the imperialism. Iqbal, thus, on the one hand, attempts at devising the means to obtain the freedom from the foreign subjugation and, on the other, explains keenly the truth of Islam and the richness of Muslim heritage in India throughout his poetry, prose writings and speeches. It is in this context that Iqbal is concerned with the great *Sufi* thinker and revivalist of Islam, Shaykh Ahmad Sirhindi who is also called *mujadid alaf-i thani (*the revivalist of the second millennium). Iqbal not only pays tribute to the Shaykh but also illustrates the profundity and vitality of his religious thinking and seeks inspiration from him.

1. The predicament of Shaykh Ahmad Sirhindi's Times

Although the early two rulers of the Mughal empire were not strict followers of the *Shari'ah* yet they did not even made any direct attack on it that would harm the Muslims.[149] It was during the reign of Akbar that the royal court deviated from the true beliefs and principles of Islam and it got replaced by the heretic beliefs in the form of '*Din-i-Ilahi'*. It is said that Akbar earlier held true beliefs but it was in his later period of his life that he turned

[149] See Fazlur Rehman*, Islam,* Weidenfeld and Nicolson, London, p. 201.

to the wrong beliefs and deviated from the actual path of religion[150]. For this some pseudo ulama are held responsible. The historians say that though he himself was illiterate yet sincere and allowed the *ulama* to have discussions in the court on various faiths and religions[151]. The scholars belonged not only to religion of Islam but also to other religions like Hinduism and Christianity. Mullah Abdullah Sultanpuri *(Mukhdum al Mulk)* and Maulana Abdul Nabi (*Sadru Sadur),* no doubt, were given high religious status but both betrayed him in fulfilling their responsibility truly[152]. Decrees about the non offering of hajj and non-payment of *zakah* were issued by them and encouraged corruption and economic exploitation. The two sons of Mullah Mubarak, Faizi and Abu Fazl although men of great talent but their liberal religious thought influenced Akbar to declare himself *imam* and *mujtahid* [153]. On the instance of Abul Fazl, Ibadat Khana was established for polemic discussions on religions and which ultimately led the foundation to his new religion, *Din-i-Ilahi*[154]. Syed Abul Hasan summarizes the substance of this religion thus:

Usury, gambling, wine and pork were made lawful by the new religion, slaughter of cows was banned, the laws relating to marriage were amended, *purdah* and circumcision were forbidden, prostitutes were settled in a separate ward and rules were made for the trade of flesh and religious form of the burial was change'. In short, a new Indian religion was devised which, like the religions of old, met halfway the passions and desires of carnal nature and made it a handmaid of personal and political interests of the king[155].

This was the predicament of Shaykh Ahmad Sirhindi's times which he witnessed himself. Akbar's successor, Jahangir too was brought up in this environment. Sirhindi himself, a man of great stature and well versed in both esoteric and exoteric sciences of Islam gathered his energies to combat this predicament. Through initiating the disciples in great number at Sirhindi and Lahore, he sent his deputies to the various quarters of India and abroad to

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150 Maulana Sayyid Abul Hasan Nadvi, *Tarikh Dawat wa Azimat,* part, IV, Majlis Tahqiqat wa Nashriyat Islam, Luknow, 1980 p.70, 82-86.
151 *Ibid.*
152 *Ibid* pp. 88-91.
153 *Ibid* p. 103.
154 *Darah Ma'arif Islamia*, vol.1, Punjab University Pakistan, pp. 889-890.
155 M.Sayid Abul Hasan Ali Nadvi, *op.cit.* p. 107.

have moral regeneration of the people[156]. Due to his constant efforts the Shaykh gained fame and even his influences reached the royal army[157]. Although, Jahangir had no pure picture of Islam before him yet was not inimical to it and initially he did little care for the special esoteric views of the Shaykh, propounded in his letters *Maktubat*[158]. However, it is said that people of vested interests among the nobles of the court motivated Jahangir that the Shaykh's endeavours are politically motivated rather than his own understanding of the letters led him to say that they contain the views which ran counter to the true Islam. On this Sirhindi was imprisoned in Gwalior jail by Jahangir for one year. The release of the Shaykh, was however, due to displeasing of religious minded courtiers and even Jahangir's own feeling of regret for the act[159].

2. The Guardian of the *Millah*

Allama Iqbal himself had keen interest in esoteric of Islam--the inner dynamism of the individual self--side by side with his poetic creativity and the philosophical thinking. Out of this devotion for spirituality of Islam he visited the grave of *Nizam ud Din waliya* in Delhi in 1905 before he left for England for higher studies. In 1935, i.e. after the return from England and during the later of his life, Iqbal visited the grave of Shaykh Ahmad Sirhindi. What impressions he gathered from his visit to Sirhindi's grave Iqbal expresses them in the context of the Indian Muslims heritage in his poem entitled, *Punjab kay Peerzadun kay Naam.* The poem is the symbolic expression of Shaykh Ahmad's great personality of religious learning and `dynamism. Among other things Iqbal describes him as the guardian of the Muslim *millah* in India:

He the guardian of the estate of *millah* in India

Whom Allah awakened at the right time.[160]

As mentioned above the 17th century witnessed the deterioration of Islamic faith and tenets in India due to the maneuvering of the pseudo-ulama

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156 *Ibid* pp. 154-155.
157 *Ibid* pp. 157.
158 *Ibid.*
159 *Ibid.* 159.
160 Iqbal*, Kulliyat-i Iqbal,* Markazi Maktaba Islami, Delhi, 1993, p. 375.

of the court and the king's own crisis in understanding the religions. Of course true religious faith and tenants serve as the chief properly of the *millah '(sarmaya-i millat*). During the times of Shaykh this estate was being exploited wrongly and heresy (*ilhad*) and the views tending to apostasy were propounded openly. By explaining the truth of *Tawhid* and Prophethood and the moral values of Islam, Sirhindi safeguarded the 'property' (Din) of the Muslim community in India. To Iqbal, this defense of religion by the Shaykh took place at its right time when the Shaykh was made aware about the loss by Almighty Allah[161].

According to Iqbal Sirhindi was adequately God-conscious and bold which did not allow him to offer prostration in Jahangir's court. He took this risk even at the cost of the severe resentment of the king. At the same time, the warmth of *iman* within his heart (self), says Iqbal, represents the vigour and dynamism of change and freedom. It excites the energies of the men of freedom:

> The one who did not bow his head to Jahangir.
>
> Whose warm breath lends heat to the freemen.[162]

3. *Faqr* and Its Truth

Faqr is the other theme which Iqbal treats in the poem vis-à-vis the Shaykh 's achievements. Some scholars are of the opinion that *faqr* is the foundation of *sufi* path. The men of saluk who propound the spirituality of life and ignore materialism are led to uphold *faqr* not as the negative entity of life but to distant themselves from the other *(ghayr)* than Allah. It means the withdrawal from ones attributes and return to Allah alone.[163] It is these traits of *faqr* and *zuhd* which bestow upon the seeker of the sufi path contentment in life and recognition of the triviality of this mundane world. This is also described as the special station of the path.[164] Iqbal has devoted a whole poem to *faqr*. It illustrates truth and meaningfulness of faqr as compared to rational and philosophical knowledge. He says that the very existence of the

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161 *Ibid.*

162 *Ibid.*

163 Dr. Ubaidullah Farahi, *Tasawwuf:Aik Tajziyati Mutalah*, Idarah Tahqiq wa Tasnif, Aligarh, 1991, p. 26.

164 *Ibid.* p. 31.

two are different. The blessings of *faqr* become possible only when a man develops a living and conscious mind in him:

The miracles of *faqr* are the crown, the throne and the soldiery

Faqr is the leader of the leaders, it is the king of kings

The end of knowledge is the purity of reason and intellect

The end of *faqr* is sanctity of heart and vision.[165]

While describing Sirhindi as the man of secrets-one who has undergone through various religious experiences and ecstasies-Iqbal seeks from him the blessings of *faqr*. It is because the latter is conscious of his own limitation who describes himself as merely a man of sight and not a man of the vision.

My eyes do see things but they lack the wakeful sight.[166]

The last part of the poem, *Punjab kay Pirzadaun kay Nam*, touches upon the Shaykh's response to Iqbal's request. This is an admonishing response which indicates the resentment of the *Sufi* and religious mentors, over the deeds of the present day Muslims.[167] The Shaykh explains to Iqbal that the order of *faqr* is closed due to the mentors' indignation against the people of Punjab. In the symbolic way the truth of *faqr* is illustrated here through the message of Sirhindi. To him the mentors abode is not the nation that will misuse the status of *faqr* for the worldly gains. The reality of *faqr* lies in the vigour of religious truth *(al-haq)* and not in subordinating oneself to the petty government. The message is, therefore, a lesson to the people of Punjab and through them the whole nation of India that the spiritual blessings of *faqr* are attainable only when the seeker follows the true path of *Tawhid* and strives to safeguard it from the contamination of greed and worldliness.

4. Significance of the Religious Experience in Sirhindi

In his famous lecture entitled "Is Religion Possible?" which forms the seventh chapter of his classic work, *The Reconstruction of Religious Thought in Islam*; Allama Iqbal discusses the two ways of understanding reality. One is

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165 *Supra.* n. 12.
166 *Ibid.* p. 302.
167 *Ibid.* p. 375.

the scientific way and the other is the religious way and considers the latter better and vital one. At the outset, of his discussion, Iqbal says that religious life may broadly be divided into three periods 'Faith,' 'Thought' and 'Discovery'.[168] The first period appears as a form of discipline where command (*hukm*) is accepted without rational understanding of its ultimate meaning and purpose. The second is the period of perfect submission which is through the rational understanding of the discipline and its ultimate source of authority.[169] In this period religious life seeks its foundation in a kind of metaphysics a logically consistent view of the world with God as a part of that view. In the third period metaphysics is replaced by psychology and religious life here develops an ambition to come into direct contact with the Ultimate Reality.[170] Now religion becomes a matter of personal assimilation of life and power and the man 'achieves a free personality, not releasing by the fitters of law but by discovering the ultimate source of the law within his own consciousness.' Iqbal emphasizes that he uses religion in this very sense and this meaning of it is known by 'unfortunate Mysticism' which is termed as life and fact denying attitude and radically opposed to empirical out look of the modern times. To Iqbal higher religion is actually a search for a larger life and is an experience and Religion (Islam) had recognized experience' as its foundation long before science learnt to do it.[171]

It is in this context of the richness of religious experience that Iqbal refers to Sirhindi in the lecture. He holds that the highest stage of religious life is the discovery of the ego *(*self) and in the individual's contact with the Most Real (God) that the ego can discover the 'uniqueness, its metaphysical status and the responsibility of improvement in that status'.[172] But the experience due to which this discovery is attained is not, says Iqbal 'conceptually manageable intellectual fact, it is a vital fact'. It is not accessible in logical categories. While referring to the discoveries of modern psychology. Iqbal mentions that it has only come to recognize that some 'unknown phenomenon of the mind' exists.[173] He directly refers to C. G.

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168 Sir Muhammad Iqbal, *The Reconstruction of Religious Thought in Islam*, Kitab Bawan, Delhi, p. 181.
169 *Ibid.*
170 *Ibid.*
171 *Ibid.* p. 182.
172 *Ibid.* p. 184.
173 *Ibid* p. 191.

Jung (1875-1961) and indirectly to William James(1842-1910)and Sigmund Freud(1856-1939). James though gives place to transcendental or mystical experience but does not recognize it as an independent entity but a function of particular experiences.[174] On the other hand, Freud's theory of unconscious is related to the hidden causes or processes of mind over which man has no control. To him instincts are the principle motivating forces in this realm.[175] Jung in his response to Freud, gives large place for intuitive contact with the majestic and divine in his theory.[176] However, these researches of analytical psychology fail to recognize the truth of the religious experience. To Iqbal, they have missed the whole point of higher religious life. Some moral restraints to the ego are not its goal but the preliminary stage of evolution to move in a direction far more important to the destiny of the ego than the moral health of the social fabric. The forward movement of religious life is described by Iqbal in terms of 'the unity of ego, his liability to dissolution, his amenability to reformation and the capacity for an ampler freedom to create new situations in known and unknown environments'.[177] To Iqbal, modern psychology has not yet touched the outer level of this richness and variety of religious-experience. It is in this domain of religious experience that Iqbal considers Shaykh Ahmad Sirhindi's contribution highly commendable. Iqbal says that the Shaykh developed a new technique of Sufism which got popular not only in India but in Afghanistan and Asiatic Russia. He discovers in this Shaykh the true understanding of religious experience (religious psychology in modern terminology) which is developed in the atmosphere of different culture'.[178] He quotes one of the letters of Shaykh in which is the latter's reply to the experience of Abdul Mumin. This was described to the Shaykh as following:

> Heavens and the Earth and God's Thorne and Hell and Paradise have all ceased to exist for me. When I look round I find them nowhere. When I stand in the presence of somebody I see nobody before me: nay even my own being is lost to me. God is infinite. Nobody can encompass Him; and this is the extreme limit of

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[174] See his *Varieties of Religious Experiences.*
[175] See his *Psychopathology of Everyday Life.*
[176] See his *Psychology of Unconsciousness.*
[177] *Supra* n. 25.
[178] *Ibid* .p. 193.

spiritual experience. No saint has been able to go beyond this.[179]

On this the Shaykh gives him the following reply:

> The experience which is described has its origin in the ever varying life of the *Qalb;* and it appears to me that the recipient of it has not yet passed even one-fourth of the innumerable "Stations" of the *Qalb.* The remaining three-fourths must be passed through in order to finish the experiences of this first "station" of spiritual life. Beyond this "station" there are other stations" known as *Ru h, Sirr-i-Khafi,* and *Sirr-i-Akhfa*, each of these four "Stations" which together constitute what is technically called' *Alam-i-Amr* has its own characteristic states and experiences. After having passed through these "stations" the seeker of truth gradually receives the illuminations of the Divine Essence.[180]

This letter of the Shaykh thus provides a better illustration of the religious experience as well as its significance. It gives the idea of inner experience of the individual what so ever the grounds of distinctions of its various stations (*maqamat)* it depicts. To reach the stage of the unique experience it is essential to pass first through the *Alam-i amr* (the world of directive energy).

Conclusion

The above discussion, thus, brings out that Allama Iqbal pays tribute to Shaykh Ahmad Sirhindi for the latter's keen insight into the Shari'ah sciences (*ulum*) and the spiritual experiences of life which made him to visualize the grave crisis of his times and led him to success in combating it. The Shaykh's constant struggle for moral and social reformation, according to Iqlal, safeguarded the real estate (*Din*) of the *millah* of the subcontinent. The truth of *faqr* and the prerequisites for its acquisition are elaborated vis-à-vis the uniqueness and purposefulness of religious experiences by Iqbal in the context of Shaykh Ahmad Sirhindi's achievements. This tribute, on the one hand, highlights the Shaykh's seminal contribution to the religious thought and, on the other, explores the possibility of understanding religion in terms of the new developments in modern philosophical, psychological and

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179 *Ibid*

180 *Ibid. Maktubat-i Rubbani*, Nawal Kishur edition, Letter no.253, p. 276.

scientific thought.

KIERKEGAARD AND IQBAL ON THE SELF

Søren Kierkegaard (1813-1855)/ Muhammad Iqbal (1877-1938)

Ghulam Sabir

The Self is an integral part of a person. It is in one's inner nature, which psychology does not grasp but it definitely exists and is real beyond any doubt. We can intuit Self; in fact only it is in intuition that the true nature of the Self is revealed. To Kierkegaard the Self is nucleus of our existence. He says that a person first learn to know himself before learning anything else This single sentence of a great philosopher takes us into certain depth of the subject. He is not telling us to know the Self but wants us to learn how to know the Self before learning anything else. This particular knowledge i.e. how to know the Self is prerequisite towards knowing one own self. It is only after we acquire the required knowledge that we can move further on. After knowing the Self the man is able to proceed towards its development.

The development of the Self is a movement from temporal to eternal. But one must be careful enough to put the first step on this path, which is extremely difficult, full of riddles and risks. It demands personal sacrifices Therefore Kierkegaard had to forego all the pleasures of his life before trotting on this difficult path. Iqbal says: *Jigar khoon ho to chashm-i-dil men hoti hai nazar paida,* (The inner gets vision only when the heart bleeds).

According to Kierkegaard the Self has its origin in God. It is a vital entity in the individual, which has deep insight and tremendous observing power. It has the power to see what remains hidden from human eye; it sees not only the object as it looks but can see the whole of it. Kierkegaard's concept of approach to the Self is a movement from temporal to eternal (*i.e. from Fana to Baqa*). His movement from the beginning to the end is ethico-religious, in which faith and Love are the most essential and central tools. The faith guides the wisdom to adopt correct path and Love is the force, which provides strength to the person to destroy all the hurdles, all the risks and all the dangers on the way. It removes all the fears and doubts from the mind of the traveller. Love is the most sacred feeling in a person as it relates to one of the attributes of God. This is why Søren Kierkegaard gives utmost

importance to the cleanliness of the heart for the growth of Love. To him purifying the heart from rubbish is the first and foremost step towards self-awareness. He says that trying to know the Self with impure heart is self-deceit. Indeed such an effort is bound to end at tragedy. Kierkegaard says that 'a person can damage his soul without anyone suspecting it, for this is not an external damage, it lies within the person's innermost being. It is like the rot at the heart of fruit, while the outside can look very delectable; it is like the inner hollowness of which the shell gives no hint.'[181]

The inner rot is the rubbish of the heart and for its treatment Kierkegaard prescribes his formula of 'up building (edifying) belief', and he says that 'again it is Love that builds up belief.' To him Love is the ground and foundation of the life of the spirit, which are to bear the building. He says 'Love is the origin of every thing, and spiritually understood love is the deepest ground of the life of the spirit. Spiritually understood, the foundation is laid down in every person in whom there is Love. And the edifice which, spiritually understood, is to be constructed, is again love.'[182] Indeed Love is Truth and is the very ground and foundation for constructing the building of the Self. It demands that the path that goes towards it must be first cleaned up and the rubbish and hurdles on its way must be removed. Kierkegaard says that a person must strengthen his/her inner being. He says that 'only thoughtless soul can let everything around it change, gives itself up as a willing prey to life's fickle, capricious changes without being alarmed by such a world, without being concerned for itself.' It is faith that strengthens the inner being of a person. 'Strengthening of the Inner Being' as termed by him, is to make a person to occupy his place in this world. One must not abandon his soul to 'worldly appetites' as human being is destined to rule the world and not to be ruled by evil forces. Man being the servant of God and the master on earth when strengthened in the inner being comes to know his place and becomes aware of his duty that he has to perform. The Self that seemed before as an illusion now turned up to him as a reality.

A Sufi would say that the place of God is human heart. It is evident that an impure heart where 'other' than God also lives cannot be a place of God. For the sake of cleansing the heart from rubbish different methods have been

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[181] *Either/Or* II, p. 222

[182] *Kierkegaard The descent into God,* p. 34-35.

adopted by different people at different times including meditation, Yoga practice, prayers, fleeing away from society and being a hermit etc. But to Kierkegaard love is the foundation material of everything and therefore love supported by faith is the best remedy. When love purifies the heart it becomes transparent. The transparency of heart resembles to the transparency of the sea, as maintained by Kierkegaard. This is why he stresses on the process of constant deepening of transparency of the heart. He says that 'the depth of the sea determines its purity and its purity determines its transparency.' According to him elevation of heaven can be seen in pure depth of the sea. Similarly when the heart is deeply transparent and calm it 'mirrors the divine elevation' of Reality in its pure depths.

Iqbal on this process comments, in one of his verse, that the journey to selfhood begins with love and ends at Beauty (i.e. the Real or God). We have seen that Kierkegaard also arrived on the same conclusion as stated above. He also believes that 'the greater conception of God, the more Self.' According to Iqbal the ego of man is deeply related to the Ultimate Ego, to which he also calls as All-embracing Ego. This All-embracing Ego is the fount of awareness of the higher consciousness of his relation with God. The ego of man when fully developed becomes deeply related with Ultimate Ego. This means that the man becomes in direct contact with God. At the same time he being a part of the Organic Whole does not lose his identity. While translating Iqbal's *Asrar-I-Khudi,* his learned teacher Professor R.A. Nicholson asked him a question on the Self. The full text of the letter in reply received by him from Iqbal has been included in his 'Introduction' of *The Secrets of the Self*, the translation of *Asrar-I-Khudi.* I quote hereunder extracts from the same letter of Iqbal, which shows wonderful similarity of his thought with Kierkegaard: He writes: "PHYSICALLY AS WELL AS SPIRITUALLY MAN IS A SELF-CONTAINED CENTRE, BUT HE IS NOT YET A COMPLETE INDIVIDUAL. THE GREATER HIS DISTANCE FROM GOD, THE LESS HIS INDIVIDUALITY. HE WHO COMES NEARER TO GOD IS THE COMPLETEST PERSON. NOR THAT HE IS FINALLY ABSORBED IN GOD; ON THE CONTRARY, HE ABSORBS GOD INTO HIMSELF. THE TRUE PERSON NOT ONLY ABSORBS THE WORLD OF MATTER; BY MASTERING IT HE ABSORBS GOD HIMSELF INTO HIS EGO."

To Kierkegaard the Self attains its highest goal by becoming deeply related to God and becomes a union of the temporal and the eternal. When one becomes aware of it, his knowledge leads him to know that 'he has actual relation to this world'. He then knows that the world has been created for him and he is for the world. That follows the man marching onward and his Self-knowledge is transformed into action with full involvement into world's affairs as vicegerent of God. This is actually the place of man, which he achieves after his real understanding of the life's way. Kierkegaard says: 'Therefore, just as soon as a person collects himself in a more understanding consideration of life, he seeks to assure himself of a coherence in everything and as the ruler of creation he approaches,…'[183].

Dr. Annemarie Schimmel a well known German scholar and an authority on Iqbal's philosophy maintains that the more developed the ego is, the better it can stand the heaviest shocks without being destroyed, and can even survive the shocks of corporeal death. Sufferings in spiritual struggle for development of the Self are inevitable and the farther away the goal, the more difficult the path. Love, however, makes the voyage beautiful and easy for the traveller. She writes: "To the problem of Love a large part of Iqbal's poetical work is dedicated. Love is, in his terminology, the force, which brings man nigh to God and consolidates the ego, and which sometimes even corresponds to intuition. It is the fiery element, which enables the growth of the personality, and without which real life cannot exist."[184] I quote below Iqbal's five Persian couplets and their English translation by his teacher Professor Nicholson:

(The luminous point whose name is the Self,

Is the life-spark beneath our dust.)

(By Love it is made more lasting,

More living, more burning, more glowing.)

(From Love proceeds the radiance of its being,

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[183] *Three Upbuilding Discourses* (1843) p 84 (Translation by Howard V. Hong and Edna H. Hong).

[184] *Gabriel's Wing* by Annemarie Schimmel p.128

And the development of its unknown possibilities.)

(Its nature gathers fire from Love,

Love instructs it to illumine the world.)

(The hardest rocks are shivered by Love's glance;

Love of God at last becomes wholly God.

Each and every above verse is coinciding beautifully with the ideas of Kierkegaard on the Self, the Love and the relationship between the two. In these verses we may also see the truth of the words of Professor Nicholson about Iqbal's brilliancy of poetic expression that 'it wins the heart before taking possession of the mind.'

THE SCIENCE OF NON LOCALITY AND EASTERN APPROACHES TO EXPLORING ULTIMATE REALITY

A SYMPOSIUM BY TEMPLETON FOUNDATION

Geneva — 21st to 23rd June 2002.

Muhammad Suheyl Umar

All things by immortal power,

Near or far,

Hiddenly

To each other linked are.

That thou canst not stir a flower

Without troubling of a star.

The Mistress of Vision

Francis Thompson

Religion is relevant to the chief concerns of our century. It can no longer be assumed with impunity that religion was a primitive superstition outgrown by civilized, rational man. One has also to take into account the fact that contemporary mind is science-ridden and for it science has become a sacral mode of knowing, the court of ultimate appeal for what is true, occupying today almost exactly the place that Revelation enjoyed in the West in the Middle Ages and in the East fairly recently. Through a misreading of science, our contemporary mindset suffers from a loss of faith in transcendence, in a reality that encompasses but surpasses our quotidian affairs. The loss is considered to be serious, and also (ironically) unnecessary, for our loss of the Transcendent World has resulted from a conceptual mistake. We assume that the modern world has discovered something that throws the transcendent world into question, but that is not the case. It is not that we have discovered

something. Rather, we have lost sight of something. For reasons that are completely understandable but nonetheless regrettable, we have unwittingly allowed ourselves to be drawn into an enveloping epistemology that cannot handle transcendence.

Science studies the empirical world. Religion seeks to understand and bind us to the entire scheme of things in which God is pre-eminent. There can not be any conflict between the two if, and when, each sticks to its proper task. A conflict arises when either oversteps its proper limits. Religion does this if / when it interferes with science's attempts to understand the empirical world, the physical world of nature. Science oversteps its limits if / when it claims to be able to access, and give definitive answers (without the help of religion) to ultimate questions, such as who are we, how did we get here, what is the meaning of life, and is there life after death? Historically, both have overstepped their proper bounds. In the West, theologians were guilty of this when (in the 16-17th centuries) they interfered with scientific pursuits. Now the shoe is on the other foot. Today, most of the transgressions come from science's side. Templeton Foundation's *Humble Approach Initiative* is a different enterprise, however. But before I come to it, a word about the "tunnel vision" of our present epistemology seems called for.

Our loss of the Transcendent World has resulted from a mistake. In various ways perceptive observers have been saying this for a century or so. It could be summarised in a way that can strip the mistake to its bare bones, reducing it to virtually a syllogism as follows:

1. ***Science has become our sacral mode of knowing***. As court of ultimate appeal for what is true, it occupies today almost exactly the place that Revelation enjoyed in the West in the Middle Ages and in the East fairly recently and which it still holds for a vast number of believers outside the fold of the modern academia and its intellectual offshoots. An intellectual historian has pointed out that already a hundred years ago Westerners had come to have more confidence in the periodic table of chemical elements than in anything the Bible asserts. The Orientals have followed suit.

2. ***The crux of science is the controlled experiment***. I am speaking of course of modern science. Generic science (old as art and religion) relies on reasoning from careful observations, but what distinguishes modern science is its introduction of the controlled experiment and reliance on it as

decisive. It is this addition that has caused modern science to take off from generic science and remake our material and conceptual worlds. It explains our confidence in science as well, for the controlled experiment delivers proof, winnowing hypotheses and retiring those that fail its test.

3. ***We can control only what is inferior to us***. Intentionally control, that is, for chains can fetter my movement without being my superior. Also, this principle holds only between orders of existence, for within the same species variables can skew the picture: the Nazis controlled the Jews without being superior to them. By superior/inferior I mean by every criterion of worth we know and probably some we know not. Many things are superior to us in size (the moon) and brute power (an earthquake), but neither are superior to us in all respect, including intelligence and freedom. Human beings controlled the American buffalo more than vice verse—it's that kind of correlation between intended power and orders of existence that this third point flags.

4. The conclusion follows inexorably. ***Science can disclose only what is inferior to us***. Have we ever in any science course or textbook encountered anything that exceeds us in every positive attribute we possess? The question is rhetorical —the answer is not. What might beings that are superior to us be? Disengaged from matter or discarnates? Angels? God? The point is, if such beings exist, science will never disclose them for the sufficient reason that it is they who dance circles around us, not we them. Because they possess perimeters we are not even aware of, let alone able to control, it is impossible for us to reduce the variables that pertain to them to the point where experiments could produce on/off, clear-cut proofs.

Nothing in this "syllogism" proves that there *is* anything superior to us, but it does prove that *if* there is, science cannot bring it to light. It proves that conclusively, I would think, save to those whose enthusiasm for science leads them to associate that word with truth in its entirety rather than with truths that are discovered by a particular method. This confuses things to no end. It also does science the disservice of rendering it amorphous and forcing

it into the impossible position of trying to be all things to all people, eventually where it falls short of that goal now.[185]

If we liken the scientific method to a flashlight, when we point it downward, towards the path we are walking on say, its beam is clear and bright. Suppose, though, we hear footsteps. Someone is approaching, and to see who it is we raise the beam to horizontal level. (This represents the social sciences and the light they cast on our species). What happens? The light starts to flicker; a loose connection has developed. The social sciences can tell us some things about ourselves—the physiological substrates of experience and how people behave on average. The complete person as an individual, though, eludes its clutches. Replete with idiosyncrasies, freedom, and commitments, to say nothing of soul and spirit if such components exist, she/he slips through the meshes of science as sea slips through the nets of fishermen. To tie this directly to our syllogism's conclusion—that science can disclose only what is inferior to us—it is axiomatic in the social sciences that in investigating areas where freedom figures, subjects must be kept in the dark about experimental design. This places them in a tilt relation to scientists who know more about what is going on than they do. Finally (to complete the analogy), if we tilt our flashlight skywards— towards the heavens may we say in present context— its light gives out completely. Its batteries drop to the bottom of the casing leaving us completely in the dark. Once again this does not prove that the heavens are populated. It argues that if it is, science cannot apprise us of that fact, much less introduce their denizens.

And science is what now provides us with our sense of reality— we are back to where our syllogism took off. And back to why it is imperative that we get rid of the tunnel vision of modernity and, to carry the analogy forward, consider an other than flashlight world to live in. Unaware of what has happened— blind to the way method has vectored metaphysics and

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[185] Absence of evidence is not evidence of absence—it might help students break through the metaphysical muddle of our time if we taught them to chant this as a modern mantram. Because the science of acoustics has nothing to say about beauty, it doesn't follow that "*Allahu jamilun*" isn't true. It's easy to see this in restricted domains, but expanding the point to worldviews is difficult, hence J. C. Smart's report that positivism is dead except in religion. So to drive home the exposé of our modern mistake which I have been circling, I want to return to my syllogism and run through it again by way of an analogy.

epistemology constricted worldview— modernity with a stroke of its methodological pen has all but written off the region of reality that religion up to the last century or so has been riveted to. As E. F. Schumacher reflected toward the close of his life: most of the things that most of humanity has most believed in did not appear on the map of reality his Oxford education handed him as it launched him on life's adventure!

Templeton Foundation's *Humble Approach Initiative* is informed precisely by the realization that we briefly outlined in the foregoing remarks. The assumption of classical physics that physical reality is local— that a point in space cannot influence another point beyond a relatively short distance— was challenged by Nicolas Gisin's 1997 experiments involving twin photons in which light particles were shown to communicate with one another instantly. Linked to research in atom optics conducted by Alain Aspect in the early 1980s, the revelation led some scientists to argue that physical reality on the most basic level is an undivided wholeness. Does it also imply that the stark division between mind and world is an illusion? The mystical traditions of all major religions have conceived of spiritual reality as, in some measure, a unified essence. Sufism, an Eastern approach to the divine rooted in Islamic faith and practice, has stressed the centrality of *tawhid,* the assertion of God's fundamental unity, to our understanding of the world and ourselves. God's love for creation gave existence to the universe, according to Sufi teaching, and human love for God closes the gap between the Creator and His creatures. The philosophic expression of Hinduism known as the Vedanta emphasizes the substantial and essential identity of the individual soul with the unqualified and unqualifiable Absolute *(Atman is Brahman).* Can the scientific concept of non-locality aid us in exploring the ultimate reality beyond time and space and causation? Can Eastern approaches to divinity help us, in turn, to find meaning in the fantastic and ongoing revelations of modern science beyond the thrill of the chase and of discovery itself?

To consider the broad implications of correlations between properties of quanta, thirteen scientists, theologians, and philosophers met in a symposium on the northern shore of Lake Geneva from 21st to 23rd June 2002. They came together to explore the implications of quantum non-locality for the character of physical reality, as well as the uses of the concept of complementarity— Niels Bohr's logical framework for acquiring and comprehending scientific knowledge— in understanding the relationship

between parts and wholes, the fundamental unity of creation from Eastern perspectives, and the search for meaning in modern science and mystical traditions.

The symposium was a part of the Templeton Foundation's *Humble Approach Initiative*. The goal of the initiative is to bring about the discovery of new spiritual information by furthering high-quality scientific research. The "humble approach" is inherently interdisciplinary, sensitive to nuance, and biased in favour of building linkages and connections. It assumes openness to new ideas and a willingness to experiment. Placing high value upon patience and perseverance, it retains a sense of wondering expectation because it recognizes, in Loren Eisley's haunting phrase, "a constant emergent novelty in nature that does not lie totally behind us, or we would not be where we are." A fundamental principle of the Templeton Foundation, in the words of its founder, is that "humility is a gateway to greater understanding and open[s] the doors to progress" in all endeavours. Sir John Templeton believes that in their quest to comprehend ultimate reality, scientists, philosophers, and theologians have much to learn about and from one another. The humble approach is intended as a corrective to parochialism. It encourages discovery and seeks to accelerate its pace.

Quantum non-locality and its implications for the character of physical reality, or what has been termed the "quantum reality" problem, is an enigma that has tantalized physicists, philosophers, and an ever-widening public for decades. The pertinent literature is vast, and it would appear that just about every conceivable avenue of approach to the problem— no matter how seemingly farfetched— has been advocated somewhere and explored. Gone are the days when the authority of physics could be invoked in support of a single established world-view! What has happened is that the pre-quantum scientistic world-view (now termed "classical") has come to be disavowed "at the top": by physicists capable of grasping the implications of quantum theory. And this in turn has called forth an abundance of conjectured alternatives, competing with one an other, as it were, to fill the ontological void— a situation that has prompted one recent author to speak of a "reality

market place". Quantum mechanics, if you will, is a scientific theory in search of a *Weltanschauung*. The search has been on since 1927.[186]

Meanwhile the spectacle of a dozen top-ranking scientists promoting twelve different world-views is hardly reassuring; and there is the temptation to conclude that truth is unattainable, or, worse still, that it is relative, a matter simply of personal opinion.

What is called for, however, is a closer look at the foundations of scientific thought: at the hidden assumptions that have conditioned our contemporary intellectual perceptions. A modest probe into matters generally ignored suffices to reveal a startling fact: it happens that every quantum-reality position thus far enunciated hinges upon one and the same ontological presupposition, a tenet which moreover derives from the philosophical speculations of Galileo and Descartes, and which, surprisingly enough, has been sharply and cogently attacked by some of the most eminent philosophers of the twentieth century. It may indeed seem strange that an ontological assumption that has thus become suspect, to say the least, should have remained unchallenged throughout the length and breadth of the quantum reality debate; but one must remember that the notion of which we speak has become ingrained in the scientific mentality to the point where it can hardly be recognized as a presupposition, let alone as a spurious premise that must go.

If we can remove this error, try to emerge from the "tunnel vision", and expose this virtually ubiquitous assumption as the fallacy it is, the pieces of the quantum puzzle begin to fall into place. The very features of quantum theory, in fact, which, prior to this ontological rectification had seemed the most incomprehensible, prove now to be the most enlightening. As might be surmised, these features bear witness, on a technical level, to an ontological fact, a truth which had hitherto been obscured. We have to identify this elusive and fallacious premise, and refute it with optimum cogency and, following this, we need to give a revised account of the *modus operandi* by which physics is defined, an account which no longer hinges upon the now disqualified axiom. This done, we shall be in a position to reflect anew upon the salient findings of quantum theory, to see whether these strange and

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[186] It was the time when Iqbal mentioned it for the first time in his writings, especially in his *Reconstruction of Religious Thought*, pp. 55-56.

puzzling facts can at last be understood. And this is the task which, partly at least, was accomplished at the symposium entitled "The Science of Non Locality and Eastern Approaches to Exploring Ultimate Reality".

At the top of the list of "strange facts" that demand an explanation stands the phenomenon of state vector collapse, which could well be termed the central enigma of quantum physics. It poses a fundamental problem that cannot be ignored or by-passed if one would understand the nature of the physical universe, and its relation to whatever other ontological planes there be.

Considerations of this kind, meanwhile, need not detain the working physicist, nor do they alter the fact that quantum mechanics is beyond doubt the most accurate, the most universal, as well as the most sophisticated scientific theory ever advanced by man. In a thousand hair-splitting experiments it has never yet been proved wrong. But quantum theory does more than answer a multitude of questions: it also raises a few of its own. And whereas classical physics, which by comparison is both crude and inaccurate, generally inspires dreams of omniscience, the new physics counsels caution and a becoming sobriety; hence the Templeton Foundation's *Humble Approach Initiative*.

It also needs to be emphasized that despite its seemingly "specialized" nature, the quantum-reality problem is beyond doubt the most universally significant question hard science has ever posed. What it demands, clearly, is an integral world-view that breaks radically with the accustomed the "classical" world-view; and that is what the symposium tried to achieve.

But some where, during the course of its historical development, western thought took a sharp turn in another direction. It branched off as a tangent from the collective heritage of all humanity and claimed the autonomy of reason. It chose to follow that reason alone, unguided by revelation and cut off from the Intellect that was regarded as its transcendent root.[187] Political and social realms quickly followed suit. Autonomous

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[187] See Martin Lings, "Intellect and Reason" in *Ancient Beliefs and Modern Superstitions*, rpt. (Lahore: Suhail Academy, 1988, 57-68; F. Schuon, *Gnosis Divine Wisdom* London: J. Murray, 1978, 93-99; S. H. Nasr, "Knowledge and its Desacralization" in *Knowledge and the Sacred* (Edinburgh: Edinburgh University Press, 1981, 1-64; Huston Smith, *Forgotten Truth* (San

statecraft and excessive individualism in the social order were the elements that shaped a dominant paradigm that did not prove successful.[188] A few centuries of unbridled activity led Western philosophy to an impasse.[189]

Commenting upon the situation, Huston Smith remarked, "the deepest reason for the crisis in philosophy is its realization that autonomous reason—reason without infusions that both power and vector it— is helpless. By itself, reason can deliver nothing apodictic. Working, as it necessarily must, with variables, variables are all it can come up with. The Enlightenment's "natural light of reason" turns out to have been a myth. Reason is not itself a light. It is more than a conductor, for it does more than transmit. It seems to resemble an adapter which makes useful translations but on condition that it is powered by a generator."[190] The nature and direction of these "infusions" is still being debated.[191] It is with this end in view that thirteen scientists, theologians, and philosophers met in the symposium. Their brief introductions are given below. Collected papers of the Symposium are in preparation.

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PARTICIPANTS OF THE SYMPOSIUM

Francisco: Harper San Francisco, 1992), 60-95. Also see his *Beyond the Post-Modern Mind,* Wheaton: Theosophical Publishing House, 1989).

188 See René Guenon, "Individualism" in *Crisis of the Modern World,* (Lahore: Suhail Academy, 1981, 51-65. Also see Social Chaos" in the same document.

189 For a few representative writings that indicate this situation, see "Scientism, Pragmatism and the Fate of Philosophy, *Inquiry*, No. 29, p. 278, cf. Huston Smith, *Beyond the Post-Modern Mind*, loc. cit. p. 142; Hilary Putnam, "After Empiricism" in *Behaviorism*, 16:1 (Spring 1988); Alasdair MacIntrye, "Philosophy; Past Conflict and Future Direction," *Proceedings and Addresses of the American Philosophical Association*, Supplement to 16/1, (September 1987); also see *Proceedings of the American Philosophical Association*, Vol. 59 (1986), and Kenneth Baynes et al., *Philosophy*: *End or Transformation*? (Cambridge: MIT Press, 1987).

190 Huston Smith, "Crisis in Modern Philosophy", in *Beyond the Post-Modern Mind,* Wheaton: Theosophical Publishing House, 1990, 137.

191 Huston Smith has pointed towards the possibility of accepting these "infusions" from *Philosophia Perennis* or *Religio-Perennis,* the sapiential doctrines of mankind. See his "Two Traditions and Philosophy" in *Religion of the Heart –Essays Presented to Frithjof Schuon on his 80th Birthday,* (Washington, D.C.: Foundation for Traditional Studies, 1991, 278-296. In this regard also see F. Schuon, "Tracing the Notion of Philosophy," *Sufism Veil and Quintessence* Lahore: Suhail Academy, 1985, 115-128; *Logic and Transcendence*, trans. Peter N. Townsend (New York: Harper and Row1975.

Bruno Guiderdoni is a director of research at the Paris *Institute of Astrophysics* (IAP) and an expert on Islam. A graduate of the University of Paris where he earned a Ph.D. in astronomy in 1986, he held a post-doctoral fellowship at the French Academy of Sciences for two years before receiving an appointment to the research staff of the IAP, which is supported by the French National Center for Scientific Research. He was promoted to his present position in 1992. Dr. Guiderdoni's research has focused on the birth and evolution of galaxies. He has produced a number of key papers that have contributed significantly to the elaboration of the paradigm of "hierarchical" galaxy formation, the theory that galaxies are the result of mergers and collisions between smaller star swarms, and participated in the discovery of the uniform glow of the cosmos at far-infrared wavelengths invisible to the human eye. He is currently working on simulations of galaxy formation that are used to interpret observations made of the universe's most distant large-scale structures. Dr. Guiderdoni is an associated scientist on the European Space Agency's two scientific satellites, Herschel and Planck, that will be launched in 2007 to survey the full far-infrared and submillimeter waveband and measure the fluctuations in the temperature of cosmological background radiation with unprecedented resolution and sensitivity. He has published more than 100 scientific papers and organized eight international conferences in his field. Before undertaking his graduate work, Dr. Guiderdoni fulfilled his national service obligation as a physics teacher in the French high school in Casablanca. Introduced to Islam in Morocco, he embraced the faith in 1987, and from 1993 to 1999, he was in charge of a television program, "Knowing Islam," that is broadcast by the state TV channel in France. Under the aegis of the Islamic Institute for Advanced Study, he has lectured widely on spirituality and on his views about the connections between science and religion. He has played an active role in promoting inter-religious dialogue, particularly among the Abrahamic traditions. Since the tragic events of September 11, he has spoken out often on the values of humility and tolerance in any search for truth. Dr. Guiderdoni's paper was entitled: ***"Islam, Contemporary Issues in Science and Religion"***

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Anindita Niyogi Balslev, an expert on classical Indian as well as Western thought traditions, is an associate research professor of philosophy at the University of Copenhagen. Born in Calcutta, she received her

bachelor's degree with honors from Calcutta University, took a master's degree in philosophy there, and went on to earn a Ph.D. in philosophy from the University of Paris in 1968. She has been a fellow at the Indian Institute of Advanced Study and a research lecturer at the Center for Cultural Research at Denmarles Aarhus University, as well as a senior lecturer at Aalborg University in Denmark and a visiting professor at the University of Kentucky, Rutgers University, and Aarhus's Institute for the History of Ideas. Dr. Balslev was a senior advisor to the Danish National Institute for Education Research in 1996, and in 1998, she held the Asutosh Mukherji Chair at the National Institute of Advanced Study in Bangalore, India. Dr. Balslev has organized a number of international conferences around cross-cultural and interdisciplinary issues and delivered invited talks in Asia, Europe, and North America on the interface between science and religion. Her articles in academic journals explore, among other issues, the problem of time, notions of self, and the meaning of consciousness in the context of Indian thought. In addition to editing two volumes, she is the author of *A Study of Time in Indian Philosophy* (1983 and 1999) and *Cultural Otherness: Correspondence with Richard Rorty* (1991 and 1999). Dr. Balslev is currently writing a new book entitled "I-Consciousness: A Cross-Cultural Inquiry." **Anindita Niyogi Balslev's** paper was entitled: ***"Ultimate Reality and Subjectivity".***

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Physicist **Raymond Y. Chiao** is widely known for pioneering experiments in the twilight zone of quantum mechanics where objects can pass through solid walls. His recent work involves investigations of faster-than-light phenomena. He has measured how long photons take to "tunnel" through a barrier that ought to be impenetrable and found that they appear to outpace the speed of light when they are successful in reaching the other side. Born in Hong Kong and educated in the United States, he earned a bachelor's degree from Princeton University, where he was elected to Phi Beta Kappa in his junior year, and a Ph.D. in physics from the Massachusetts Institute of Technology in 1965. After teaching at MIT for two years, he joined the physics faculty of the University of California, Berkeley and was named a full professor in 1977. Dr. Chlao has held a Woodrow Wilson Fellowship and an Alfred P Sloan Fellowship. A member of Sigma Xi, he won the second prize of the Gravity Research Foundation in 1981 and the

Scientific Innovation Award for Outstanding Work in Modern Optics from the Center for Advanced Study at the University of New Mexico in 1986. He is a fellow of both the American Physical Society and the Optical Society of America. Dr. Chiao has published some 125 papers in major scientific journals. He edited *Amazing Light* (1996), a volume dedicated to the Nobel laureate Charles H. Townes on the occasion of his eightieth birthday.

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William C. Chittick, a professor of comparative studies at the State University of New York, Stony Brook, has written extensively on Islamic philosophy with special emphasis on the Sufi tradition. A graduate of the College of Wooster in Ohio, he received a Ph.D. in Persian language and literature from Tehran University in 1974 and later studied at the Imperial Iranian Academy of Philosophy in Tehran, where he also served as an assistant professor in 1978-79. Dr. Chittick had begun his teaching career at the Center for the Humanities at Aryamehr Technical University in Tehran. He returned to the United States just before the Iranian Revolution and in 1981 accepted an appointment as an assistant editor of Columbia Universitys *Encyclopedia Iranica* (1982-85). In 1983, he was named an assistant professor of religious studies at SUNY Stony Brook. He was promoted to his present position in 1996. Dr. Chittick has been a visiting professor of Arabic literature at Harvard University. A former member of the board of editors of the SUNY Press, he has held a Fulbright Fellowship and two fellowships awarded by the National Endowment for the Humanities. In 2000, he was awarded the Mevlana Ozel Odula by the Kombassan Foundation in Turkey. In addition to numerous articles in scholarly journals and contributions to encyclopedias, histories, and collected works, he has translated a dozen major Persian and Arabic texts into English and is the author or co-author of eleven books. His most recent studies are *Sufism:* A *Short Introduction* (Oneworld, 2000) and *The Heart* of Islamic *Philosophy: The Quest for Self-Knowledge in the Teachings of Afdal al-Din Kashani* (Oxford University Press, 200 1). **William C. Chittick's** paper was entitled: ***"The Search for Meaning in the Islamic Intellectual Tradition".***

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The director of the Indian Institute of Astrophysics in Bangalore for the past decade, **Ramanath Cowsik** has made wide ranging contributions to

theoretical physics, experimental physics, and science management. He formerly headed the Gravitation Group at the Tata Institute of Fundamental Research in Bombay with which he was associated for forty years. His papers pointing out the astrophysical and cosmological consequences of finite neutrino masses contributed to the basic paradigm for studying galaxy formation and dark matter. Dr. Cowsik also has advanced knowledge of the behavior of cosmic rays at low and high energies, and his discussion of non-thermal particle populations inside supernova remnants have led to a physical understanding of their spectra. In the course of his experimental searches for new feeble forces and tests of Einstein's principle of equivalence of inertial and gravitational masses, he designed a new kind of torsion balance with which he performed the first laboratory experiment searching for the so-called "fifth force"— a hypothesized addition to the four fundamental interactions between objects in nature. Investigating the dust of presolar diamonds, rubies, and carborandum embedded and preserved in meteorites, Dr. Cowsik has been able to infer the formation of these materials in stellar winds and to estimate by a completely new method the age of the Milky Way. Recently he explored the Himalayas to establish a unique site for optical infrared astronomy in Ladakh on the border of Tibet. Dr. Cowsik was born in Nagpur in central India and took his baccalaureate degree at the University of Mysore. He earned a master's degree in physics at Karnatak University and, after further graduate work at the Atomic Energy Training School in Mumbai, he received his Ph.D. in physics from the University of Bombay in 1969. He had joined the Tata Institute as a research associate in 1961, and he subsequently became a research fellow, a fellow, a reader, an associate professor, a professor, and a senior professor there. Named a Distinguished Professor in 1996, he retired from his faculty position earlier this year. Dr. Cowsik has held a research fellowship at the University of Chicago and been a visiting lecturer and assistant professor at the University of California, Berkeley, a senior visiting fellow at the Max Planck Institute for Physics and Astrophysics in Munich, and a distinguished visiting professor at Washington University in St. Louis. Currently serving on the governing council of the Commission on Cosmic Rays of the International Union of Pure and Applied Physics, he is a fellow of the Indian National Science Academy, the Indian Academy of Sciences, the National Academy of Sciences, India, the Indian Geophysical Union, and the Third World Academy of Sciences. In addition to invited lectureships, he is the recipient of many other honors,

including the Vikram, Sarabhai Award for Space Sciences, the Shanti Swarup Bhatnagar Award in Physical Sciences, a NASA Public Service Group Achievement Award, the Third World Academy of Sciences Award in Basic Sciences, the Vainu Bappu Memorial Award of the Indian National Science Academy, the S.N. Bose Birth Centenary Award of the Indian Science Congress Association, and the Padma Shri Award from the President of India. Dr. Cowsik has published some 180 papers in scientific journals and is the editor of *Cosmic Pathways* (1985) and two other books. **Ramanath Cowsik's** paper was entitled: ***"A triad of non-localities".***

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Nicolas Gisin is the group leader for the Optics Division of the Group of Applied Physics at the University of Geneva. He is also a professor of physics at the Swiss university. His research is at the crossroads between modern optics and quantum physics, and he works both on conceptual issues and on their application. Dr. Gisin's experiments in long distance quantum entanglement are at the heart of quantum information processing and have made him an international leader in the emerging field of quantum cryptography-a technique using single photons of light to send secret messages with the assurance that no one has eavesdropped on them. A graduate of the University of Geneva, he took his undergraduate degree and earned master's degrees in mathematics and in physics there as well as a Ph.D. in physics in 1981. His dissertation was awarded a prize by the Louis de Broglie Foundation. Dr Gisin did post-graduate work in optics at the University of Rochester and upon his return to Switzerland in 1984, he joined a start-up company, Alphatonix, dedicated to the development of fiber instrumentation for the telecommunications industry. Four years later, he joined a Swiss software company. In 1988, he accepted an invitation to return to his alma mater as head of the optics section of the Group of Applied Physics. His work won worldwide attention in 1997 when he reported the results of an experiment in which he split a light beam in two, at a facility near the Geneva train station, and sent the resulting pair of photons in opposite directions over fiber-optic cables to detectors located more than six miles apart. Dr. Gisin confirmed that a stimulus applied to just one of the twin beams instantly determined the state of the sibling photon as predicted by quantum theory. What Albert Einstein called "spooky action at a distance" has been the focus of much of Dr. Gisin's subsequent research. It

is increasing our understanding of the information content of quantum states and holds promise not only for encryption but also computation among other applications. Dr. Gisin has published some 200 papers in scientific journals. Once a nationally ranked field hockey player, he also finds time to work with Swiss youngsters interested in the sport.

University Professor of Interdisciplinary Science and a professor of physics at George Mason University, Greek-born **Menas Kafatos** has explored the implications for physics and for philosophy of particle "entanglement" over long distances in two books. Written with his George Mason colleague Robert Nadeau, *The Non-Local Universe* (Oxford University Press, 1999) and *The Conscious Universe* (Springer-Veriag, 1990 and 2000) consider the potential of nonlocality to transform our understanding of the nature of reality. Dr. Kafatos, who is a native of Crete, received his bachelor's degree from Cornell University and a Ph.D. in physics from the Massachusetts Institute of Technology in 1972. After three years of post-doctoral research in astrophysics at the University of Colorado and the NASA/Goddard Space Flight Centre, he joined the George Mason physics faculty and was promoted to full professor in 1984. Dr. Kafatos won international attention for his early work in theoretical astrophysics, particularly his work on black holes, those "ghosts" of massive dead stars whose gravitational imprint, frozen in space, challenges physicists to broaden their cosmological perspective. His current research interests include Earth observing and Earth systems science, foundations of quantum theory, the nature of consciousness, and cosmology. In 1991, he founded George Mason's Institute of Computational Sciences and Informatics, which evolved into its School of Computational Sciences. Four years later, he founded the Centre for Earth Observing and Space Research (CESOR). He still serves as director of CESOR and as principal investigator of several federally funded George Mason programs for the effective use of data anticipated from the next generation of space platforms among other activities. Dr. Kafatos is an honorary member of the Romanian Academy of Sciences and currently serves as vice president for education of the American Astronautical Society. He has published some 165 scientific papers and is the co-editor of six books and the co-author of four others. Menas Kafatos' paper was entitled: ***"Non-locality, Consciousness and the Emerging New Science"***

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Azim A. Nanji is director of the *Institute for Ismaili Studies* in London. Born in Kenya, he took a first-class degree with honours in literature and religious studies at Makerere University in Uganda and received a Ph.D. in Islamic studies from McGill University in 1972. After spending a year as a post-graduate research and teaching fellow at McGill's Institute of Islamic Studies, he joined the religious studies faculty of Oklahoma State University, where he became a full professor in 1983. In 1988, he was named professor and chair of religion at the University of Florida, a position he held for the next ten years. Dr. Nanji also has been a Visiting Killam Fellow at Dalhousie University in Halifax, Nova Scotia and a Margaret Gest Visiting Professor of Religion at Haverford College. He has received a Rockefeller Fellowship, an American Institute of Indian Studies Senior Research Fellowship, a Canada Council Award, and a research grant from the National Endowment for the Humanities. An elected member of the American Society for the Study of Islam, he delivered the plenary lecture at the National Conference on Religion, Philanthropy, and Civil Society in Washington in 1994. He is a member of the steering committee for the Aga Khan Award for Architecture and was previously co-chair of the Islam Section of the American Academy of Religion as well as a member of the editorial advisory board of the *Journal of the American Academy of Religion.* Dr. Nanji has published some forty scholarly articles and book chapters and is the editor of three books and the author or co-author of two others. His 1978 study, *The Nizari Ismaili Tradition,* won the Council of Canada Publication Award. **Azim Nanji's** paper was entitled; ***"The Science of Nonlocality and Eastern Approaches to Exploring Ultimate Reality — A Perspective from the Muslim Philosophical Tradition.***

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An investigator probing images of galaxy clusters produced by the Hubble Space Telescope for clues to the distribution of "dark" matter, the dominant but unseen gravitational influence on the cosmos, **Priyamvada Natarajan** is an assistant professor of astrophysics at Yale University with an abiding interest in the philosophy of science. Born in the south of India, she received bachelor's degrees in science and in mathematics from the Massachusetts Institute of Technology then pursued graduate work in MIT's program in science, technology, and society before taking a Ph.D. in astrophysics at Cambridge University in 1998. Awarded a research fellowship

at Trinity College, Cambridge, she continued her work in England for the next several years before accepting an appointment to the Yale faculty in 2000. Dr. Natarajan's research focuses on a range of topics in astrophysical cosmology. Among other questions, she is investigating the role of gamma-ray bursts in star formation, how groups of galaxies may form and change over time, and the evolution and scale of the massive whirlpools, known as black holes, in their centres. She serves on the advisory committee of the American Association for the Advancement of Science's Program of Dialogue on Science, Ethics, and Religion and on the board of advisors of the John Templeton Foundation. In addition to some thirty papers in scientific journals, Dr. Natarajan has published a collection of poems.

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Ravi Ravindara is a professor emeritus at Dalhousie University in Halifax, Nova Scotia where, until his recent retirement, he had been professor and chair of comparative religion, professor of international development studies, and adjunct professor of physics. Born in Patiala in the Punjab area of northwest India, he earned his bachelor's and master's degrees at the Indian Institute of Technology in Kharagpur and a Ph.D. in physics at the University of Toronto in 1965. Subsequent to a post-doctoral fellowship in physics at Toronto, he held a post-doctoral fellowship in philosophy at Princeton University and a postdoctoral fellowship in religion at Columbia University. He began his teaching career as an assistant professor of physics at Dalhousie in 1966. Formerly a visiting member of the Institute for Advanced Study in Princeton and a visiting member of the Indian Institute of Advanced Study in Simla, he has been the visiting Kern Professor of Science and Spirituality at the California Institute of Integral Studies and the Korett Visiting Professor of Philosophy and Medicine at the Pacific Medical Centre in San Francisco. The founding director of the Threshold Award for Integrative Knowledge given by the Swiss Threshold Foundation, he formerly served as chair of its selection committee. Dr. Ravindra is the recipient of numerous research grants and a John Templeton Foundation Science and Religion Course Program grant as well as fellowships from the Canada Council the Social Sciences and Humanities Research Council of Canada, and the Shastri Indo-Canadian Institute. He formerly served as a director of the International Theosophical Society's School of the Wisdom in Madras, India, a member of the board of advisors of the John Templeton

Foundation, a member of the board of judges for the Templeton Prize, and a member of the advisory committee for the Program of Dialogue Between Science and Religion of the American Association for the Advancement of Science. Dr. Ravindra has had a long and deep interest in the metaphysics and practical spiritual disciplines of Hinduism, Buddhism, and Christianity. Among contemporary spiritual teachers, he has been influenced by Jiddu Krishnamurti and Jeanne de Salzmann, who was a pupil of George Ivanovitch Gurdjieff. In addition to publishing more than 120 articles in scientific and scholarly journals, Dr. Ravindra is the author or co-author of ten books. Among them are the highly influential *Whispers from the Other Shore: Spiritual Search East and West* (1984 and 2000*)* and *The Yoga of Christ in the Gospel According to St. John (*1990 and 1992*).* His most recent study, *Science and the* Sacree4 was published by the Theosophical Publishing House in 2000. A new book, *Krishnainurti in the Long Line of Rishis in India, will* be published next year by Munshilal Manoharlal Publishers in its Builders of Indian Philosophy Series.

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The founding director of the *Center for Quantum Philosophy*, a division of the Zurich-based Institute for Interdisciplinary Studies (IIS), **Antoine Suarez** conducts and promotes research on the foundations of quantum theory and seeks to stimulate discussion of its metaphysical implications. He is a native of Spain and graduated from the University of Zaragoza before pursing graduate work in experimental physics at the University of Fribourg in Switzerland. Dr. Suarez took his Ph.D. in natural science at the Swiss Federal Institute of Technology (Eidgenössische Technische Hochschule Zürich or ETH) in 1975. While at ETH, he not only became interested in the philosophical significance of quantum mechanics, but also in genetic epistemology. For more than a decade, he was engaged in research on cognitive growth that led to the development of improved methods for teaching mathematics and science to children. Dr. Suarez directed the Swiss think tank, IIS, from 1985 to 1993*,* and with major support from the Leman Foundation, he undertook studies that brought the insights of philosophers, theologians, and ethicists to bear on advances in science. Since assuming his current position in 1989, he has conducted and facilitated, with support from the Odier Foundation, experimental research on correlations of nonlocal quantum, that is, faster-than-light influences on phenomena. With Valerio

Scarani, he was the first scientist to propose experiments using moving measuring devices to investigate the tension between quantum mechanics and relativity, especially whether there is a real time ordering behind nonlocal influences. Dr. Suarez actively collaborated with Nicola Gisin's Group at the University of Geneva in carrying out the work. Recent results suggesting that relativity's tools for dealing with the flow of time are irrelevant in the realm of quantum processes have strengthened his interest in exploring possible links among levels of reality. In addition to articles in scientific journals, chapters in volumes of collected works, and an early study on the relation of thought to action in adolescents, he is the editor (with Alfred Driessen) of *Mathematical Undecidability, Quantum Nonlocality and the Question of the Existence of God* (Kluwer, 1997).

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Muhammad Suheyl Umar is the director of Pakistan's Iqbal Academy in Lahore, a research institution devoted to the works and teachings of the Muslim poet and philosopher Muhammad Iqbal, a political activist known as the father of modern Pakistan. Suheyl Umar is also the founding editor of *Riwayat,* an intellectual journal in the Urdu language that has published articles on science, philosophy, and mysticism for the past twenty-one years, and the editor of *Iqbal Review,* an academic quarterly published alternately in Urdu and English, which has both Persian and Arabic editions. A graduate of Government College in Lahore where he took both a baccalaureate degree and master's degree in English, he earned an M.Phil. in Iqbal studies at Allama Iqbal Open University in Islamabad and, after nearly two decades in educational administration and academic publishing, a Ph.D. in philosophy from Punjab University in Lahore is in progress. Umar began his editorial career as managing partner of Suhail Academy, a publishing company in Lahore, and in the early 1980s served as secretary general of Al-Manara Academy and as vice principal and head of the English department at Al-Manara Public School. He was named deputy director of Iqbal Academy in 1984 and assumed the directorship in 1997. Formerly chief editor of *Al-Ma'arif* and editor of *Studies in Tradition,* he served as academic director of the Institute of Islamic Culture in Lahore for two years and was named an honorary fellow in 1992. The next year he was a visiting scholar at the International Institute of Islamic Thought and Civilization in Kuala Lampur, Malaysia. In addition to articles published in scholarly journals, he has edited

a number of volumes of Iqbal's writings and collections of various literary works in Urdu. He also has published bibliographies and descriptions of extant manuscript collections in Pakistan and has several new works in preparation. **Muhammad Suheyl Umar's** paper was entitled: ***"The Science of Nonlocality-Perspectives and Implications".*** [192]

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One of the world's leading researchers in the field of quantum physics, **Antone Zeilinger** is professor of physics and director of the Experimental Physics Institute at the University of Vienna. His work first received international attention in 1997 when he and his colleagues at the University of Innsbruck, where he was then directing the Institute of Experimental Physics, confirmed the possibility of quantum teleportation by demonstrating, through the use of pairs of entangled photons, that the properties of one particle can be instantly transferred to another over an arbitrary distance at the speed of light. More recently, Dr. Zellinger's quantum interference experiments with "buckyball" molecules (whose shapes resemble the geodesic domes designed by R. Buckminster Fuller), so far the largest objects to have demonstrated quantum behaviour, have attracted the notice of the scientific community. By proving that clusters of seventy carbon atoms obey quantum-mechanical rules, he has extended the quantum domain further than ever before. Born in Austria, Dr. Zellinger studied at the University of Vienna and earned a Ph.D. in physics and in mathematics in 1971. After a lectureship at the Technical University of Vienna, a Fulbright fellowship at the Neutron Diffraction Laboratory of the Massachusetts Institute of Technology, and professorships at MIT, the Technical University of Vienna, and the University of Innsbruck, he accepted his present position in 1999. Dr. Zeilinger has been a visiting professor at the University of Melbourne, the Technical University of Munich, and the College of France, as well as an adjunct professor at Hampshire College in Amherst, Massachusetts, and a visiting research fellow at Merton College, Oxford. The former president of the Austrian Physical Society, he was named Austrian Scientist of the Year in 1996. His many other honors include the Senior Humboldt Fellow Prize, Germanys Order pour le Mérite, the 2000 Science Prize of the City of Vienna, and the 2001 World Future Award. Dr. Zeilinger

[192] This paper is included in the present issue of *Iqbal Review*.

is a fellow of the American Physical Society, a member of the European Academy of Arts and Sciences, and an honorary professor of the University of Science and Technology of China. He serves on the editorial boards of the *Foundations of Physics Letters* and *Physical Review A*. The author of more than 200 papers published in major scientific journals, he is co-editor (with Dirk Bouwmeester and Artur Ekert) of *The Physics of Quantum Information (*2000*)* and most recently (with Chiara Macchiavello and G. Massimo Palma) of *Quantum Computation and Quantum Information Theory,* which was published last year by World Scientific. Mindful of the practical applications of his research for the processing and transmission of information, including quantum teleportation, quantum cryptography, and quantum computing, Dr. Zellinger is also intrigued by the epistemological implications of quantum physics. He has met with the Dalai Lama to discuss them and has challenged his scientific colleagues to consider which notions appearing distinct and even opposed today will turn out to be so for future generations.

THE SCIENCE OF NONLOCALITY— PERSPECTIVES AND IMPLICATIONS

Muhammad Suheyl Umar

"The Qur'an, which is the basis of both *tariqah* and *shari'ah*, affirms continually the Transcendence of God and also His Immediate Presence, as do the sacred books of all orthodox religion; but because Sufi writers, inasmuch as the *tariqah* is the way of approach to God, tend to dwell especially upon His Immediate Presence, as expressed in His Names the Near, the Hearer, the Seer, it has been concluded by some that Sufism is pantheistic. This conclusion is totally false: as has been said in defence of the Red Indian against the same accusation of pantheism, it may also be said of the Sufi that '***he does not for one moment imagine that God is in the world; but he knows that the world is mysteriously plunged in God***.' "[193]

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"They worship me as One and as many, because they see that all is in me."

Bhagavad-Gita

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"In the depth I saw ingathered, bound by love in one single volume, that which is dispersed in leaves throughout the universe: substances and accidents and their relations, as though fused together in such a way that what I tell is but a simple light."

Dante

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A connectedness unconditioned, which the reason can't fathom
Has the Lord of the mankind with the spirit (or life) of the mankind.

Rumi

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[193] Frithjof Schuon, "Apercus sur la Tradition des Indiens de l'Amerique du Nord", *Etudes Traditionnelles* (Chacornac), 1949, p. 164. See also Titus Burckhardt, *Du Soufisme* (P. Derain, Lyon), pp. 17-20.

"Life blood of a sun gushes forth if the heart of a grain of sand is split."

Muhammad Iqbal

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The idea of interconnectedness of the apparently disconnected phenomenal world, of an "undivided wholeness" is our shared human heritage. This is evident from the few random examples given above that have been selected from diverse sources. The citations could be increased a thousand times since this is, perhaps, the idea, the leitmotif that one most frequently encounters in all the religions and wisdom traditions of mankind. The sole exception is modern science.[194]

I would not attempt to try and look at the scientific side of the question. All I intend to offer here is in the form of general comments that highlight certain important facts that pertain to the issue, which itself is quite old now, and to make some remarks about the implications that the science of Nonlocality carries for scientific thinking and our current worldview.

Modern science[195] has come a long way from its "mechanistic world picture" inherited from the Renaissance and the Scientific Revolution. The journey had been arduous and the terrain treacherous. There were several landmarks during the voyage:[196]

- The Rise of the idea of "Laws of Nature".

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[194] Somewhere, during the course of its historical development, western thought took a sharp turn in another direction. It branched off as a tangent from the collective heritage of all humanity and claimed the autonomy of reason. It chose to follow reason alone, reason unguided by revelation and cut off from the Intellect that was regarded as its transcendent root. See Martin Lings, "Intellect and Reason" in *Ancient Beliefs and Modern Superstitions*, rpt. (Lahore: Suhail Academy, 1988, 57-68); F. Schuon, *Gnosis Divine Wisdom*, London: J. Murray, 1978, 93-99, rpt. (Lahore: Suhail Academy, 2002); S. H. Nasr, "Knowledge and its Desacralization" in *Knowledge and the Sacred* (Edinburgh: Edinburgh University Press, 1981, 1-64, rpt. (Lahore: Suhail Academy, 2000); Huston Smith, *Forgotten Truth* (San Francisco: Harper San Francisco, 1992), 60-95, rpt. (Lahore: Suhail Academy, 1988). Also see his *Beyond the Post-Modern Mind*, Wheaton: Theosophical Publishing House, 1989, rpt. (Lahore: Suhail Academy, 2002).

[195] That is to say the science that developed in the west after the Renaissance.

[196] For details of these intellectual landmarks of modern science see S. H. Nasr, "The Traditional Sciences, the Scientific Revolution, and its Aftermath" in *Religion and the Order of Nature* (Oxford University Press, 1996, Ch. 4, pp. 126-162.

- Copernicus, Copernicanism, and the "Infinite Universe".
- Ideas of Bacon and Gilbert.
- Galileo and the idea of Mathematical Physics.
- Kepler and the Idea of Celestial Physics.
- Descartes, his "Dualism" and the "Mathematization of Space, Time and Matter".
- Newton, *The Principia*, and the "Order in Nature".
- The "Quantification of Nature" in the Eighteenth Century.
- Evolution; Darwinian and Neo-Darwinian.
- Modern Physics: Relativity and Quantum Mechanics.
- Order and Chaos; The Prigoginian View.
- Scientific Positivism and its Critique.

With quantum mechanics the departure[197] of the understanding of order in nature from that of classical physics become more radical, and even the mathematical order that quantum mechanics shares with classical physic is different in that the latter accepts this order only in the statistical sense. Indeterminacy and uncertainty lie at the heart of quantum mechanics, going back to the question of the wave or corpuscular nature of light[198] and including the formal principle of uncertainty stated by Werner Heisenberg.

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[197] Modern physics is at once the reversal of the worldview of classical physics and its continuation. This can be seen particularly in the theory of relativity, which rejects completely the Newtonian concept of space and time and the eighteenth century conception of matter and yet remains faithful to the mathematical view of the order of nature so central to Newtonian thought. Moreover, Einstein continued to consider the order dominating over the Universe as being related to God, who strictly imposed causality over the Universe in which chance "did not play dice" with the Universe. In the same way that Newtonian laws of motion are special cases of relativistic laws of motion, Einsteinian relativity shares the basic conception of the order of nature with classical physics as far as relating order to mathematical patterns is concerned.

[198] The debate as to whether light is a wave or a stream of corpuscles goes back to Newton and Christian Huygens, each of whom had their defenders in the eighteenth and nineteenth centuries, Newton's view being supported by such figures as Ruggiero Boscovich and Pierre Simon de Laplace and Huygens by Robert Hooke and Thomas Young. These views remained, however, exclusive of each other and did not become accepted at the same time within a single view of physics.

The major differences between the two are to be seen, first, in the notion of matter, which becomes convertible to energy in modern physics, while being "neither created not destroyed" in classical physics and chemistry, and second, in the transfer of absoluteness from space and time in Newtonian physics to the velocity of light in relativity. The vision of the Universe issuing from the two schools of physics is different, yet the idea of mathematical order permeating the two visions of the natural world is the same.

In quantum mechanics, however, the two views become combined in such a way as to be logically and even imaginably difficult to conceive. On the one hand Max Planck discovered the discontinuous emission of energy, and Einstein proposed the theory of photons or particles of light, called also "quanta of action," which were discovered by Arthur H. Compton and Chandrasekhar V. Raman, all leading to the theory of the granular nature of light. On the other hand the de Broglie-Schrodinger theory led to the view that matter and light had wavelike structure. This led to the "wave-particle" duality, which was seen by the physicists of the day and continues to be viewed by most physicists as being irreducible to a single reality.[199]

There are, however, other interpretations of this "ambiguity" as well as other main features of quantum mechanics: These include Paul Dirace's assertion that we can only know a defined state partially; Heisenberg's uncertainty principle, which involves the very concept of our understanding of nature; the denial of local causality; all laws of quantum mechanics being probabilistic; and the denial of classical determinism.[200]

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[199] The result of this discovery of quantum mechanics led to the Copenhagen School, which argues that no picture of reality is possible and that micro nature is bipartite in an ultimate way, with the result that the nexus between physics and what philosophical understanding of nature it might possess has thus become severed, at least for those who accept the interpretation of this school.

[200] On the major features of quantum mechanics and its worldview see Paul A. M. Dirac, *The Principles of Quantum Mechanics* (New York and Oxford: Oxford University Press, 1947); Leonard Schiff, *Quantum Mechanics* (New York: McGraw-Hill, 1955); Henry Margenau, *The Nature of Physical Reality* (New York: McGraw-Hill, 1950); Victor Weiskopf, *Physics in the Twentieth Century* (Cambridge, Mass.: M.I.T. Press, 1972); Johnvon Neumann, *The Mathematical Foundations of Quantum Mechanics*, trans. R. Beyer (Princeton, N.J.: Princeton University Press, 1955); Max Jammer, *The Philosophy of Quantum Mechanics* (New York: Wiley, 1974); David Bohm and Basil Hiley, *The Undivided Universe: An Ontological Interpretation of*

Modern physics also presents a radically different view of the subatomic world from the simple atomism of classical physics, which considered nature to be comprised of indivisible particles— that is, atoms (from *atomos*, meaning literally "indivisible" in Greek). At the beginning of the twentieth century physicists looked for "ultimate" building particles of matter, and many continue to do so today. But as more and more particles came to be discovered in addition to protons, electrons, and neutrons there now exists such an array of particles, called by some physicists "a particle zoo," that many have given up on the idea of finding the "ultimate' particles or building blocks of matter, and rather envisage a vast ocean of energy from which different particles with various lifetimes issue forth and into which they disappear.[201] One might say that whereas Newtonian physics saw an order underlying what appears outwardly as chaos in the perceptible world, for quantum mechanics there is chaos or at least an unknowable reality underlying the order of macro and even micro nature. Some have concluded from this that the limits of human knowledge in the understanding of nature have been reached beyond which one can only appeal to wisdom and other modes of cognition; others, needless to say, reject any other possible mode of knowing. Whatever the case, it is here that metaphysical and religious modes of knowledge concerning even the natural world are entering into the intellectual world of at least some physicists for the first time since the Scientific Revolution, even if until now most physicists who have turned to those other modes of knowledge (usually drawn from non-Western sources) have not been able to gain a profound grasp of those alternative modes of understanding the nature of reality.

Perhaps the greatest challenge to the modern scientific understanding of order comes from the consequences of the Bell theorem, which implies a fundamental interconnectedness of the parts of the Universe denied by both classical and modern physics until only recently.[202] (John Stuart) Bell's

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Quantum Theory (London: Routledge, 1993); and the more popular work of Gary Zukav, *The Dancing Wu Li Master: An Overview of the New Physics* (New York and London: Bantam Books, 1984).

[201] "The world of particle physics is a world of sparkling energy forever dancing with itself in the form of its particles as they twinkle in and out of existence, collide, transmute and disappear again." Zukav, *Dancing Wu Li*, p. 194.

[202] Henry Stapp call Bell's theorem "the most profound discovery of science." See Stapp. "Bell's Theorem and World Process," in *Il Nuovo Cimento* (Vol. 29B, 1975), p. 271.

theorem asserts that if quantum mechanics is correct then the principle of local causes and the whole notion of locality as we understand it is false. And because it has been shown that the predictions based upon quantum mechanic calculations correspond to experimental results, the whole idea of local causality must be false. The theorem itself is based on the remarkable behaviour of particles in two different points in space in which the change of the state of one is detected *immediately* in the other without an apparent causal nexus between them, leading some physicists to speak of the transfer of information at superluminal speeds, something that Einstein rejected.[203]

One of the most notable interpretations of the consequences of Bell's theorem is that of David Bohm, who speaks of the unbroken wholeness of physical reality and denies one of the basic tenets of classical physics, which is the divisibility and analyzability of the physical world. Rather than the world being composed of separate objects in an "explicate order," it is, according to Bohm, an *implicate order* [204] or an unbroken wholeness, about which one can only say that it is. "There is an order unfolded into the very process of the universe but that unfolded [or implicate] order may not be readily apparent."[205] Particles appear to be discontiguous in the explicate order, but they are in reality contiguous in that implicate order which our ordinary consciousness does not perceive. Matter itself is a form of the implicate order, and in contrast to what we perceive through our segmented consciousness it cannot be reduced to particles. If only we were to acquire the light consciousness which could know the whole or that-which-is, one would see the separate elements related to the implicate order as the implicate order.

In this interpretation of quantum mechanics and especially Bell's theorem, not only is there an insistence upon wholeness as coming before all parts and segments, but also an insistence upon the significance of consciousness for

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[203] Bell's Theorem has many metaphysical and philosophical implications, some of which have been examined by a number of philosophers and scientists. See especially Wolfgang Smith, "Bell's Theorem and the Perennial Ontology" in *Sophia*, *A Journal of Traditional Studies*, The Foundation for Traditional Studies, Oakton, VA, Vol. 3, No. 1, Summer, 1997, pp. 19-40.

[204] See David Bohm, *Wholeness and the Implicate Order* (Boston: Routledge and Kegan Paul, 1980).

[205] Zukav, *Dancing Wu Li*, p. 306.

the mode in which we perceive nature,[206] and the necessity to have a transformation of consciousness in order to perceive that whole in whose matrix alone the behaviour of the "parts" can be understood. Obviously, there are implication that such a view carries for the religious understanding of the order of nature and the reassertion of the significance and validity of its view. But it needs to be added here that the views of Bohm have not gained the adherence of every physicist, although many have been attracted to it. The prevalent attitude remains that of the Copenhagen School and the identification of the order of nature with laws determined by statistical probabilities and by mathematical models using statistical methods.

Here and there one sees attempts to reassert a view of the order of nature based on the wholeness of nature as a living being determining its parts in not only biology but also physics,[207] and one must recall the famous assertion of Lewis Thomas that the entire Earth is a cell.[208] Still, it is not as yet realized widely enough that traditionally the principles and conception of science employed in natural philosophy did not originate from the sciences themselves but from metaphysics as implied by the Greek notion of *epistēmē*,[209] whereas in contrast, ever since the seventeenth century, the theory of the sciences came to be based on the sciences themselves in an *a posteriori* and not an *a priori* manner. A new philosophy of nature was thus developed that was based on the sciences of nature and thereby divorced from metaphysical principles, which in all traditional climates had provided the

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[206] Of course, ever since the pioneering work of Eugene Wigner in quantum mechanics, consciousness has been considered as an important element of physics by many physicists in contrast to the view of classical physics whose description of the mathematical order of the universe is considered to be completely independent of the mode of consciousness of the person who perceived that order or of consciousness itself.

[207] E. E. Harris writes that the whole cosmos is a "single, individual totality, organistic throughout." George F. McClean (ed.), *Man and Nature* (Calcutta: Oxford University Press, 1978), p. 30, adding that according to this view *Totum in toto et totum in qualibet parte*.

[208] See *The Lives of a Cell* (New York: Viking Press, 1974), p. 5.

[209] The concept of science outlined by Aristotle in his *Posterior Analytics* was certainly not based on his biology or physics. See Ernan McMullin, "Concepts of Science in the Scientific Revolution," in David Lindberg and Robert Westman (eds.), *Reappraisals of the Scientific Revolution* (Cambridge and New York: Cambridge University Press, 1990), p. 28.

common principles and ground for discourse between the religious and scientific understanding of nature.[210]

Through all the important transformations in modern science from Newtonian mechanics to Bohm's implicate order, it is the scientific understanding of the order of nature that continues to dominate the contemporary scene so as to make a dialogue with the authentically religious view of nature difficult if not well nigh impossible. Even those interested in such a dialogue tend to equate the dogmatism of purely manmade science with sacred doctrines of a Divine Origin, asking both sides to put aside their "dogmatism" to bring about mutual understanding.[211] And then there are those scientists who think they can reach the sacred and metaphysical truth contained in the heart of religions by analyzing to an even greater degree the complex structures of the material world as if one could ever cast aside the veil of Isis.[212] The truth remains that no matter how much it changes, modern science cannot but deal with phenomena, whereas the religious understanding of the order of nature is based ultimately upon knowledge of the ontological reality and root of things in the Divine and the significance of their form and qualitative characteristics on the phenomenal plane as reflecting noumenal realities belonging to the Divine Order. No serious dialogue is possible unless the empirical or scientific view of the order of nature is forced to abdicate from its absolutistic domination over the contemporary dominion of knowledge and the religious understanding of the order of nature comes to be taken seriously in all its depth and grandeur and not as the pale shadow of its real self as it has become during its period of retreat and dilution in the past few centuries in the West.

But the events that have taken place in recent years indicate that the situation has started to change. It is starting to look as if physics is out of its

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[210] For the necessity of any veritable science to be rooted in metaphysical principles in the authentic and traditional sense of metaphysics, see Fernand Brunner, *Science et realité* (Paris: Aubier, 1954).

[211] An example of such an approach is to be found in the recent work of Brian Swimme and Thomas Berry, *The Universe Story* (San Francisco: Harper, 1992), which despite its good intentions does not distinguish between doctrines of a sacred character and mental crystallisations that have paraded as scientific dogmas as if the Holy Ghost and the mathematical or physical inspiration of a scientist are on the same level.

[212] See Frithjof Schuon, *Roots of the Human Condition* (Bloomington, Ind.: World Wisdom Books, 1991), "The Veil of Isis," pp. 15ff.

"tunnel vision" already. We can say that on the authority of the EPR (Einstein-Podolsky-Rosen) experiment, which establishes that the universe if nonlocal. Separated parts of it— how widely they are separated makes no difference; it could be from here to the rim of the universe— are simultaneously in touch with one another. In lay language— the only one available to me, anyway— what the EPR experiment demonstrates is that if you separate two interacting particles and give one of them a downspin, instantly the other will spin upward.

The theoretical consequences of this finding are revolutionary— sufficiently so for Henry Stapp of the University of California, Berkeley, to call it "the most important finding of science, ever," for it relegates space, time, and matter (the matrices of the world we normally know) to provisional status. If we were to look out upon the world through a window with (say) nine panes of glass set in place by latticework, we would *see* the outdoors as divided by the latticework (which of course is not in the landscape we are looking at). Something like that pertains here.

What are the implications of all this? Let us take a look.

Everything we perceive with our senses (and analyse and classify into laws and relationships) has to do with the relative world, a kind of phantom play of names and forces flowing temporally in the stream of space and time. In this relative world there are no absolutes; time and change govern everything. Nowhere are there fixed frames of reference, nowhere objects. No event can be perceived in exactly the same way by all observers, and there is an irreducible uncertainty that precludes the possibility of our ever knowing all the fundamental properties of the phenomena that we experience and investigate. This uncertainty is built into the very fabric of the universe, so nothing escapes it. The whole cannot be reduced to a set of basic building blocks, for on the cosmic scale matter can disappear into pure energy and reappear in a different guise. The ancients would not have been surprised. *Anicca, anicca*; impermanence, impermanence.

But that is only half the picture. What puts post-EPR physics all but outside the truncated vision of the classical physics can now be stated explicitly. The moment of truth in the EPR experiment opens a rift in the cloud of unknowing through which physicists catch sight of another world, or at least another reality. "Everything we [now] know about Nature is in

accord with the idea that the fundamental process of Nature lies outside space-time, but generates events that can be located in space-time." We have not mentioned matter, but the phrase space-time implies it, for physics locks the three together. And in the words of Geoffrey Chew, "If you begin with matter as a given, you're lost."

One should not be quick to jump, like the New Age enthusiasts, to the conclusion that physicists have discovered God, which of course is not the case. All physicists have found is that what runs the show (runs the spatio-temporal-material universe) lies outside that show. Still, in establishing the existence of "something," if only a not-further-characterised X, beyond the spatio-temporal-material world, nonlocality provides us with the first level platform since modern science arose on which scientists and theologians can continue their discussions. For God too resides outside those three perimeters.

We may say a few words about Intelligent Design here though in the end one should not bank on it. More and more, scientists are finding that if the mathematical ratios in nature had been the slightest bit different, life could not have evolved. Were the force of gravity the tiniest bit stronger, all stars would be blue giants, while if it were slightly weaker, all would be red dwarfs, neither of which come close to being habitable. Or again, had the earth spun in an orbit 5 percent closer to the sun, it would have experienced a runaway greenhouse effect, creating unbearable surface temperatures and evaporating the oceans; while on the other hand, if it had been positioned just 1 percent farther out, it would have experienced runaway glaciations that locked earth's water into permanent ice. On and on. We get the point.[213]

I am not myself a scientist, but I naturally favour the design hypothesis. At sea with numbers higher than "the ten thousand things" (the archaic

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[213] Physicists of the stature of John Polkinghorne find it impossible to believe that such fine-tuning (and the apparent frequency with which it occurs) could have resulted from chance. They toss around improbability figures in the range of one in ten followed by forty zeros. For them, improbabilities of this order all but require us to think that the universe was designed to make human life possible, to which they add that design implies an intelligent, intentional designer. They do not laugh when a fellow scientist, intentional designer. They do not laugh when a fellow scientist, Dale Kohler, writes, "we have been scraping away at physical reality all these centuries, and now the layer of the remaining little that we don't understand is so thin that God's face is staring right out at us."

Chinese phrase for heaven and earth, the universe), ten followed by forty zeros completely escapes me. Still, a single fact can carry me to the conclusion the ratios I cited suggest. If the Andromeda Galaxy were not there, neither would we be we are, quite literally, made of stardust. This is quite enough to blast me into a moment of mystical frisson.

The problem, however, with citing a must-have-been-designed universe as an added indication that physics is out of the tunnel is that an equal number of qualified physicists— Stephen Hawking, for one— disagree with this reading of the matter. Whether the disagreement turns on evidence or on the philosophical lens through which the evidence is viewed it itself at the heart of the controversy. Because the evidence is beyond my competence to weigh, any call I made in the dispute would reflect nothing more than my own beliefs and perceptions and thus would count for nothing. It is a good sign that the issue is being vigorously discussed, and no one can fault believers for finding in Intelligent Design a resource for their faith. But that is the most that can be said at this point in the dispute.

Going back to nonlocality, one must admit that physicists disagree over its implications too. Quantum physics or what has been termed the "quantum reality" is an enigma that has tantalised physicists, philosophers, and an ever-widening public for decades. The pertinent literature is vast, and it would appear that just about every conceivable avenue of approach to the problem— no matter how seemingly farfetched— has been advocated somewhere and explored. Gone are the days when the authority of physics could be invoked in support of a single established world-view! What has happened is that the pre-quantum scientistic world-view (now termed "classical") has come to be disavowed "at the top": by physicists capable of grasping the implications of quantum theory. And this in turn has called forth an abundance of conjectured alternatives, competing with one an other, as it were, to fill the ontological void— a situation that has prompted one recent author to speak of a "reality market place." Quantum mechanics, if you will, is a scientific theory in search of a *Weltanschauung*. The search has been on since 1927.

Meanwhile the spectacle of a dozen top-ranking scientists promoting twelve different world-views is hardly reassuring; and there is the temptation to conclude that truth is unattainable, or, worse still, that it is relative, a matter simply of personal opinion.

What is called for, however, is a closer look at the foundations of scientific thought: at the hidden assumptions that have conditioned our contemporary intellectual perceptions. A modest probe into matters generally ignored suffices to reveal a startling fact: it happens that every quantum-reality position thus far enunciated hinges upon one and the same ontological presupposition, a tenet which moreover derives from the philosophical speculations of Galileo and Descartes, and which, surprisingly enough, has been sharply and cogently attacked by some of the most eminent philosophers of the twentieth century. It may indeed seem strange that an ontological assumption that has thus become suspect, to say the least, should have remained unchallenged throughout the length and breadth of the quantum reality debate; but one must remember that the notion of which we speak has become ingrained in the scientific mentality to the point where it can hardly be recognised as a presupposition, let alone as a spurious premise that must go.

Remove this error, expose this virtually ubiquitous assumption as the fallacy it is, and the pieces of the quantum puzzle begin to fall into place. The very features of quantum theory, in fact, which, prior to this ontological rectification had seemed the most incomprehensible, prove now to be the most enlightening. As might be surmised, these features bear witness, on a technical level, to an ontological fact, a truth which had hitherto been obscured.

This done, we shall be in a position to reflect anew upon the salient findings of quantum theory, to see whether these strange and puzzling facts can at last be understood. At the top of the list of "strange facts" that demand an explanation stands the phenomenon of state vector collapse, which could well be termed the central enigma of quantum physics. It poses a fundamental problem that cannot be ignored or by- passed if one would understand the nature of the physical universe, and its relation to whatever other ontological planes there be.

Considerations of this kind do not alter the fact that quantum mechanics is beyond doubt the most accurate, the most universal, as well as the most sophisticated scientific theory ever advanced by man. In a thousand hair-splitting experiments it has never yet been proved wrong. But quantum theory does more than answer a multitude of questions: it also raises a few of its own. And whereas classical physics, which by comparison is both crude

and inaccurate, generally inspires dreams of omniscience, the new physics counsels caution and a becoming sobriety. This reminds us of the article written by John Bell that was published in 1990, one month before his death. Bell wrote, "Suppose that quantum mechanics were found to resist *precise* formulation. Suppose that when formulation beyond FAPP (For All Practical Purposes) is attempted, we find an unmoving finger obstinately pointing outside the subject, to the mind of the observer, to the Hindu scripture, to God or even only Gravitation? Would not that be very, very interesting?"[214] To this we can add the comment made by Antoine Suarez, "Quantum correlations are found to resist precise formulations in terms of time ordered causality. In our experiment we find an unmoveable finger obstinately pointing outside time. What does this most interesting fact imply for the character of the physical reality?"[215]

Where does this unmoveable finger obstinately point to outside time? This is a complex issue that defies neat solutions. Even to attempt a tentative answer would require a rare combination of a scientist and a well trained but undaunted theologian who would not succumb to the pull of comparisons that invariably exerts itself on theologians, drawing them into offering apologetics equating eternal immutable data with shifting theories of science. I would present here one such answer which comes from the famous authority on quantum physics, Wolfgang Smith.

> The upshot is this: It is indeed possible to conceive of a quantum particle as an ordinary object in space, but only on condition that it be linked to a pilot wave which in a way transcends the bounds of space and time. The pilot wave, thus, does not, strictly speaking, exist in space-time; and yet it is supposedly an actual wave in contrast to a mere "wave function" as conceived in the standard theory. But this implies (from a traditional ontological point of view) that this pilot wave is situated precisely on the intermediary plane.[216]

The question remains, of course, whether quantum particles as conceived

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[214] John Bell, *Physics World*, August 1990, Volume 3 No 8, p. 33.

[215] Antoine Suarez, "Quantum Correlations and the Burning Bush" unpublished paper.

[216] For a detailed exposition of the concept of multiple levels of being, couched in a terminology appropriate for the consumption of lay people and scientists alike, see Huston Smith, *Forgotten Truth*, Suhail Academy, 1988.

by de Broglie and Bohm do in fact exist. Inasmuch as opposite answers to this question have been given by two empirically equivalent versions of quantum theory, it is clear, moreover, that the matter cannot be resolved by the methods of physics. What has, however, been rigorously proved is this: if a quantum particle exists as an ordinary object in space, there must then also exist a corresponding entity which by virtue of its non-locality belongs to the intermediary domain.

This result, I say, is of immense significance. It amounts to a recognition, on the strength of modern physics, of an ancient ontological truth: the Hermetic fact, if you will, that whatsoever exists on the corporeal plane must pre-exist on the intermediary, and indeed, on every higher ontological level. One knows today that not even an ordinary particle can stand alone, but must be accompanied by a "subtle" presence that transcends the accustomed spatio-temporal bounds, a presence which consequently strikes us as mysterious and indeed preternatural: this quantum theoretic fact, I say, has now received its ontological interpretation. What it signifies is that the corporeal world does not exist apart from higher ontological planes. What actually exists is the integral cosmos, which consists, to say it once more, of a spiritual centre, a corporeal periphery, and a subtle intermediary domain: neither "heaven" alone nor "earth" alone, but "heaven and earth" as the opening verse of Genesis declares.

Huston Smith once remarked that the modern West is the first society to view the corporeal world as a closed system; that error has now been corrected. It has been rectified by the most accurate branch of modern science: by quantum physics, which in light of the preceding considerations has to do with "border phenomena," that is to say, phenomena which betoken the proximity of a trans-corporeal plane. In the standard version of quantum theory, it is the physical plane that enters the picture, and in the de Broglie Bohm version, it is the intermediary.[217]

Mention was made earlier of a transformation of consciousness in order to perceive that whole in whose matrix alone the behaviour of the "parts" can be understood. In this connection mention may also be made of the

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[217] Wolfgang Smith, "Bell's theorem-Perennial Ontology", *Sophia*, *Journal of the Foundation for Traditional Studies*, Vol. 3, No. 1, Summer 1997.

findings made about the subjective pole of existence. Here I would let Huston Smith say it. The quote comes from his *Cleansing the Doors of Perception*[218] where he has reported the recent researches of Stanley von Grof. The picture that emerges looks like this:

> The ultimate source of existence is the Void, the supracosmic Silence, the uncreated and absolutely ineffable Supreme.
>
> The first possible formulation of this source is Universal Mind. Here, too, words fail, for Universal Mind transcends the dichotomies, polarities, and paradoxes that harass the relative world and our finite minds comprehension of it. Insofar as description is attempted, the Vedantic ternary—Infinite Existence, Infinite Intelligence, Infinite Bliss — is as serviceable as any.
>
> God is not limited to his forgoing, "abstract" modes. He can be encountered concretely, as the God of the Old and New Testaments, Buddha, Shiva, or in other modes. These modes do not, however, wear the mantle of ultimacy or provide final answers.
>
> The phenomenal worlds owe their existence to Universal Mind, which Mind does not itself become implicated in their categories. Man, together with the three-dimensional world he experiences, is but one of innumerable modes through which Mind experiences itself. The heavy physicality and seemingly objective finality of man's material world, its space-time grid and the laws of nature that offer themselves as if they were the *sina qua nons* of existence itself—all these are in fact highly provisional and relative. Under exceptional circumstances, people can rise to a level of consciousness at which they see that taken together they constitute but one of innumerable sets of limiting constructs that Universal Mind assumes. To saddle that Mind itself with those constructs would be as ridiculous as trying to understand the human mind through the rules of chess.
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> Created entities tend progressively to lose contact with their original source and the awareness of their pristine identity with it. In the initial stage of this falling away, those entities maintain contact with their source, and the separation is playful, relative, and obviously tentative. An image

[218] Huston Smith, *Cleansing the Doors of Perception,* Penguin Putnam, New York, 2002, p. 94-97.

that illustrates this stage is that of a wave of the ocean. From a certain point of view the wave is a distinct entity—we can speak of it as large, fast-moving, green, and foamy. But its individuation doesn't keep it from belonging to the ocean proper.

At the next stage, created entities assume a partial independence and we can observe the beginnings of cosmic screen work, the Absolute's assumption of veils that are gossamer-like in the beginning but grow increasingly opaque. Here unity with the source can be temporarily forgotten in the way an actor can forget his own identity as he identifies with the character he depicts.

Eventually the veiling process reaches a point where individuation looks like the normal state of things and the original wholeness is perceived only intuitively and sporadically. This can be likened to the relationship between cells of a body and the body as a while. Cells are separate entities but function as their body's parts. Individuation and participation are dialectically combined. Complex biochemical interactions bridge provisional boundaries to ensure the functioning of the organism as a whole.

In the final stage, the separation is practically complete. Liaison with the source is lost sight of and the original identity forgotten. The screen is now all but impermeable, and a radical change of consciousness is required to break through it. A snowflake can serve as a symbol. In outward appearance it doesn't look like water; to understand that nevertheless it is water we have to get down to H2O.

Human beings who manage to effect the requisite break through find thereafter that life's polarities paradoxically do and do not exist. This holds for such contraries as matter and spirit, good and evil, permanence and change, heaven and hell, beauty and ugliness, and agony and ecstasy. In the end, there is no difference between subject and object, observer and observed experiencer and experienced, creator and creation.

In the early years of psychoanalysis when hostility was shown to its theories on account of their astonishing novelty and they were dismissed as products of their authors perverted imaginations, Freud used to hold up against this objection the argument that no human brain could have invented such facts and connections had they not been persistently forced

on it by a series of converging and interlocking observation. Grof might argue in the same way: to wit, that the cosmology and ontology that his patients came up with is as un-inventable as Freud's own system. Actually, however, he does not do so. In the manner of a good phenomenologist, he lets the evidence speak for itself, neither undermining it by referring it back to causes which (in purporting to explain it) would explain it away nor arguing that it is true. As phenomenologists themselves would say, he "brackets" his own judgement regarding the truth question and contents himself with summarising what his patients said.

The idea that the "three-dimensional world" is only one of many experiential worlds created by the Universal Mind appeared to them much more logical than the opposite alternative that is so frequently taken for granted, namely, that the material world has objective reality of its own and that the human consciousness and the concept of God are merely products of highly organized matter, the human brain. When closely analyzed the latter concept presents at least as many incongruities, paradoxes and absurdities as the concept of the Universal Mind. Problems such as the finitude versus infinity of time and space; the enigma of the origin of matter, energy and space; and the mystery of the prime impulse appear to be so overwhelming and defeating that one seriously questions why this approach should be given priority in our things."

In the end it may also be recalled that beyond the diverse cosmologies and understandings of the order of nature in various traditional religions there stands, as already mentioned, a religious view of the cosmos that reveals remarkable universality if one goes beyond the world of forms and the external to seek the inner meaning of myths and symbols in different religious universes. First, it needs to be remembered that a religion not only addresses a human collectivity; it also creates a cosmic ambience, a sector of the Universe that shares in the religious realities in question.

According to the metaphysical teachings of various traditions and the cosmologies which are their applications to the cosmic sector, the Divine Principle is not only the Origin of the cosmos but also the Source of the religion that links humanity to both the Divine Principle and the order of nature. Some religious traditions such as Confucianism, Taoism, and Buddhism do not concern themselves with the creative and generating function of the Divine Principle as do the Abrahamic monotheisms and

Hinduism. But in both types of faith, there is the Supreme Principle that is the Origin of both man and the cosmos, even if "Origin" is not understood in a cosmogonic sense in some cases. More particularly, each religion is the manifestation of a Divine Word, a Logos, or demiurgic principle that, within the religious cosmos created by a particular revelation or "heavenly dispensation," is the direct source of the religion in question as well as the immediate "ruler" of the cosmos within which that religion functions.

Finally, every being in the world of nature not only issues from the Divine Principle or the One, but also reflects Its Wisdom and, to use theistic language, sings the praises of the Lord. The religious understanding of the order of nature, which we can share only on the condition of conforming ourselves to the world of the Spirit, enables us to read the signatures of God upon the face of things and heart their prayers. It thereby re-creates a link between us and the world of nature that involves not only our bodies and psyches but also the Spirit within us and our final end. It enables us to see the sacred in nature and therefore to treat it not only with respect but also as part of our greater self. It reminds us how precious each being created by God is and how great a sin to destroy wantonly any creature that by virtue of its existence bears the imprint of the Divine and is witness to the One who is our Origin and End.

But the Promethean minds believe themselves to be creatures of chance moving freely in a vacuum and capable of "self-creation", all within the framework of an existence devoid of meaning; the world, so it seems, is absurd, but no notice is taken—and this is typical—of the absurdity of admitting the appearance within an absurd world of a being regarded as capable of remarking that absurdity. Modern man is fundamentally ignorant of what the most childish of catechisms reveals, doubtless in a language that is pictorial and sentimental, yet adequate for its purpose; namely, that we are inwardly connected with a Substance which is Being, Consciousness, and Life, and of which we are contingent and transitory modalities. He is consequently unaware of being involved in a titanic drama in terms of which this world, seemingly so solid, is as tenuous as a spider's web. Existence, invisible and underlying, is concrete, not abstract; it "sleeps" and "awakes", it "breathes" and can make worlds collapse; space, time, and man are no more than minute fragments of a Being and a Movement which escapes all our measurements and all that we can imagine. The divine Substance, however,

cannot have the limiting properties of matter, nor those of an animic fluid. Its homogeneity implies a transcending discontinuity the traces of which are indeed apparent around us and within us (the body is not life and life is not intelligence), but which we can not grasp adequately with the help of our terrestrial categories alone.

The great misconception, then, is to believe that the basis of our existence is space and that the factors which make up our individual destinies are contained in it, whereas in reality this basis—at one and the same time immutable and in movement according to the relationship envisaged—is situated in a "supra-space" which we can perceive only through the heart intellect and about which those explosions of total Consciousness, the Revelations, speak to us symbolically. The error is to believe that the causes which determine human history or which carry it to its conclusion belong to the same order as our matter or as "natural laws", whereas in fact the whole visible cosmos is resting upon an invisible volcano—and also, at a deeper ontological level, upon a formless ocean of bliss. Men imagine that this earth, these mountains, or bodies can only be destroyed by forces on their own level, by masses or energies belonging to our physical universe. What they do not see, however, is that this world, in appearance so compact, can collapse *ab intra*, that matter can flow back "inward" by a process of transmutation, and that the whole of space can shrink like a balloon emptied of air; in short, that fragility and impermanence not only affect things within a space naively supposed to be stable, they also affect existence itself with all its categories. Our nature consists precisely in the ability to escape, in our inner-most core and in the "unchanging Center", from the break-up of a macrocosm that has become over solidified, and to become reintegrated in the Immutable whence we came forth. What proves this possibility is our capacity to conceive this Immutability; it is also proved, in a concordant manner, by the fact (at once unique and multiple) of Revelation.

THE SCIENCE OF NONLOCALITY AND THE ULTIMATE REALITY FURTHER REMARKS AND RELEVANT EXTRACTS

Compiled by

Muhammad Suheyl Umar

PART–I

Ultimate Reality— The Absolute,

The Infinite and The Perfect

Summary

Metaphysics does not begin with Being but with that Ultimate Reality which is at once the Absolute, the Infinite and the Perfect Good and which contains all the possibilities of manifestation. Beyond being in Itself, It is the Principle of Pure Being which is the first determination of the Beyond-Being in the direction of manifestation and creation. Inasmuch as it infinite, the Ultimate Reality must possess all possibilities including the possibility of the negation of Itself which is the world or manifestation. There is therefore a projection towards nothingness which constitutes the cosmogonic act and brings all things into existence. The Beyond-Being generates Pure Being, Pure Being generates Universal Existence and Universal Existence actualizes and externalizes the latent possibilities in the world of existence as usually understood. In a hierarchic fashion there is a descent in the direction of nothingness or non-existence without this limit every being reached.[219]

Dimensions, Modes, and Degrees of the Divine Order [220]

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[219] From S. H. Nasr, (Ed.) "Introduction" in *The Essential writings of Frithjof Schuon,* Amity House, 1986, (rpt. Lahore: Suhail Academy, 2002). pp. 309-311.

[220] From S. H. Nasr, (Ed.) "Metaphysics" in *The Essential writings of Frithjof Schuon,* Amity House, 1986, (rpt. Lahore: Suhail Academy, 2002). pp. 309-311.

The idea that the Supreme Principle is both Absolute Reality and, for that very reason, Infinite Possibility, can suffice unto itself, for it contains everything, notably the necessity for a universal Manifestation. From a less synthetic point of view, however, we may envisage a third hypostatic element, namely the Perfect Quality; being the Absolute, the Principle is thereby the Infinite and the Perfect. Absoluteness of the Real, infinitude of the Possible, perfection of the Good; these are the "initial dimensions" of the Divine Order.

This order also comprise "modes": Wisdom, Power, Goodness, that is, the content or the substance of the Supreme Principle consists in these three modes and each of them is at once Absolute, Infinite and Perfect; for each divine mode participates by definition in the nature of the divine Substance and thus comprises absolute Reality, infinite Possibility and perfect Quality. In Wisdom, as in Power and as in Goodness, there is in fact no contingency, no limitation, or any imperfection; being Absolute, these modes cannot not be, and being Infinite, they are inexhaustible; being Perfect, they lack nothing.

The Principle not only possesses "dimensions" and "modes", it also has degrees, and this in virtue of its very Infinitude, which projects the Principle into Relativity and thus produces, so to speak, this metacosmic "space" which we term to Divine Order. These degrees are the divine Essence, the divine Potentiality and the divine Manifestation; or Beyond-Being, Being, the Creator, and the Spirit, the existentiating Logos, which constitutes the divine Centre of the total cosmos.

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Necessity and Liberty; Unicity and Totality. One the one hand, the Absolute is "necessary" Being, that which must be, which cannot not be, and which for that very reason is unique; on the other hand, the Infinite is "free" Being, which is unlimited and which contains all that can be, and which for that very reason is total.

This absolute and infinite, necessary and free, unique and total Reality is *ipso facto* perfect: for it lacks nothing, and it possesses in consequence all that is positive; it suffices unto itself. That is, the Absolute, like the Infinite which is as its intrinsic complement, its *shakti*, coincides with Perfection; the Sovereign Good is the very substance of the Absolute.

In the world, the existence of things, hence their relative reality, is derived from the Absolute; their containers, their diversity and their multiplicity, thus space, time, form, number, are derived from the Infinite; and finally, their qualities, whether substantial or accidental, are derived from Perfection. For Perfection, the Sovereign Good, contains the three Modes or hypostatic Functions which we have just mentioned, namely: Intelligence or Consciousness, or Wisdom, or Ipseity; Power or Strength: Goodness which coincides with Beauty and Beatitude. It is Infinitude which so to speak projects the Sovereign Good into relativity, or in other words, which creates relativity, *Maya*; it is in relativity that the supreme Qualities become differentiated and give rise to the Qualities of the creation, inspiring and acting Divine, thus to the personal God; it is from Him that are derived all the cosmic qualities with their indefinite gradations and differentiations.

To say Absolute is to say Reality and Sovereign Good; to say Infinite is to say in addition communication, radiation, and in consequence, relativity; hence also differentiation, contrast, privation: the Infinite is All-Possibility. *Atma* wills to clothe even nothingness, and it does so by and in *Maya*.

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The Infinite, by its radiation brought about so to speak by the pressure—or the overflowing—of the innumerable possibilities, transposes the substance of the Absolute, namely the Sovereign Good, into relativity; this transposition gives rise *a priori* to the reflected image of the Good, namely the creating Being. The Good, which coincides with the Absolute, is thus prolonged in the direction of relativity and gives rise first of all to Being, which contains the archetypes, and then to Existence, which manifests them in indefinitely varied modes and according to the rhythms of the diverse cosmic cycles.

The Absolute is that which "cannot not be"; and the necessity of Being excludes all "that which is not It." In an analogous but as it were inverse manner, the Infinite is that which "can be all"; and the liberty of Being includes all "that which is It", hence all that is possible, this "all" being limitless, precisely. In other words: God alone is necessary Being: in Him there is nothing contingent or, for all the more reason, arbitrary; and on the contrary, outside of Him, there are only contingent existences; and God alone is free Being: in Him there is no determination *ab extra* or any

constraint, and on the contrary, outside of Him, there are only the existences and on the contrary, outside of Him, there are only the existences that He determines. On the one hand, an existence may or may not be, and that is its contingency; on the other hand, the existence of a thing contains but one possibility, that of that thing and nothing else—and that is its limitation—whereas the being of God contains all that is possible.

Or again: God, by His nature, hence by necessity, "must" create, but He "is free" to create what He wills in virtue of His liberty; He is "necessary" in the In-Itself-ness, yet He is free in the modalities. In other words: God "is free" to create what He wills—and He can will only in conformity with His nature—but He "must" follow the logic of things; His activity is necessary in laws and structures, while being free in their contents.

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The Interplay of the Hypostases

To say Absolute, is to say Infinite; Infinitude is an intrinsic aspect of the Absolute. It is from this "dimensions" of Infinitude that the world necessarily springs forth; the world exists because the Absolute, being such, implies Infinitude.

This Absolute-Infinite is the Sovereign Good; the Agathon of Plato. Now the Good—according to the Augustinian formula—tends essentially to communicate itself; being the Sovereign Good, the Absolute-Infinite cannot but project the world; which is to say that the Absolute, being the Sovereign Good, comprises thereby Infinitude and Radiation.

If we were to be asked what the Absolute is, we would reply first of all that it is necessary and not merely possible Reality; absolute Reality, hence infinite and perfect, precisely; and we would add—in conformity with the level of the question asked—that the Absolute is that which, in the world, is reflected as the existence of things. Without the Absolute, there is no existence; the aspect of absoluteness of a thing is what distinguishes it from inexistence, if one may so put it. Compared to empty space, each grain of sand is a miracle.

If we were to be asked further what the Infinite is, we would reply, with the quasi-empiricist logic demanded by the question itself that the Infinite is that which, in the world, appears as modes of expanse or of extension, such

as space, time, form or diversity, number or multiplicity, matter or substance. In other words, and to be more precise: there is a conserving mode, and this is space; a transforming mode, and this is time; a qualitative mode, and this is form, not inasmuch as it limits, but inasmuch as it implies indefinite diversity; a quantitative mode, and this is number, not inasmuch as it fixes a given quantity, but inasmuch as it too is indefinite; a substantial mode, and this is matter, it too being without limit as is shown by the star-filled sky. Each of these modes has its prolongation—or more exactly its basis—in the animic state and beyond, for these modes are the very pillars of universal existence.

Finally, if we were to be asked what Perfection or the Sovereign Good is—for to say God is to say Goodness, as is indicated by the very expression of a "good God"—we would say that it is that which, in the world, is manifested as qualities and, more concretely, as qualitative phenomena; perfections and perfect things. We say "that which manifests" and not "that which is": the existential categories, the qualities of things, but all of these factors manifest, precisely, what the Divine Hypostases—if one may say so—are in themselves and beyond the world.

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PART–II

Ultimate Reality— Metaphysical–Exposition

If one were to ask what is metaphysics, the primary answer would be the science of the Real or, more specifically, the knowledge by means of which man is able to distinguish between the Real and the illusory and to know things in their essence or as they are, which means ultimately to know them *in divinis*.[221] The knowledge of the Principle which is at once the absolute and infinite Reality is the heart of metaphysics while the distinction between levels of universal and cosmic existence, including both the macrocosm and the microcosm, are like its manifestation but also the principles of the various sciences of a cosmological order. At the heart of the traditional sciences of the cosmos, as well as traditional anthropology, psychology, and

[221] This element comprises the heart of all traditional doctrine while the method concerns means of attaching oneself to the Real. On the relation between doctrine and method see M. Pallis, "The Marriage of Wisdom and Method," *Studies in Comparative Religion* 6/2 (1972): 78-104.

aesthetics stands the scientia sacra which contains the principles of these sciences while being primarily concerned with the knowledge of the Principle which is both sacred knowledge and knowledge of the sacred par excellence, since the Sacred as such is none other than the Principle.

The Principle is Reality in contrast to all that appears as real but which is not reality in the ultimate sense. The Principle is the Absolute compared to which all is relative. It is Infinite while all else is finite. The Principle is One and Unique while manifestation is multiplicity. It is the Supreme Substance compared to which all else is accident. It is the Essence to which all things are juxtaposed as form. It is at once Beyond Being and being while the order of multiplicity is comprised of existents. It alone is while all else becomes, for It alone is eternal in the ultimate sense while all that is externalized partakes of change. It is the Origin but also the End, the alpha and the omega. It is Emptiness if the world is envisaged as fullness and Fullness if the relative is perceived in the light of its ontological poverty and essential nothingness.[222] These are all manners of speaking of the Ultimate Reality which can be known but not by man as such. It can only be known through the sun of the Divine Self residing at the centre of the human soul. But all these ways of describing or referring to the Principle possess meaning and are efficacious as points of reference and support for that knowledge of the Real that in its realized aspect always terminates in the Ineffable and in that silence which is the "reflection" or "shadow" of the non-manifested aspect of the Principal upon the plane of manifestation. From that unitary point of view, the Principle or the Source is seen as not only the Inward but also the Outward,[223] not only the One but also the essential reality of the many which is but the reflection of the One. At the top of that mountain of unitive knowledge there resides but the One, discrimination between the Real and

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[222] Some contemporary scholars such as R. Panikkar (in his *Inter-religious Dialogue*, New York, 1978) have contrasted the Buddhist *Shunyata* and the Christian Pleroma but, metaphysically speaking, the concept of Ultimate Reality as emptiness and as fullness complement each other like the *yin-yang* symbol and both manifest themselves in every integral tradition. Even in Christianity where the symbolism of Divine Fullness is emphasized and developed with remarkable elaboration in Franciscan theology, esp. that of St. Bonaventure, the complementary vision of emptiness appears in the teachings of the Dominican Meister Eckhart who speaks of the "desert of the Godhead".

[223] In one of the most difficult verses to comprehend from the exoteric point of view the Qur'an states, "*He is the First and the Last; the Outward and the Inward*" (LVII:3).

the unreal terminates in the awareness of the non-dual nature of the Real, the awareness which is the heart of gnosis and which represents not human knowledge but God's knowledge of Himself, the consciousness which is the goal of the path of knowledge and the essence of *scientia sacra*.[224]

The Ultimate Reality is at once Absolute and Infinite since no finite reality can be absolute due to its exclusion of some domain of reality. This reality is also the Supreme Good or the Perfection which is inseparable from the Absolute. Reality, being at once Absolute, Infinite, and Supreme Goodness or Perfection, cannot but give rise to the world or multiplicity which must be realized for otherwise that Reality would exclude certain possibilities and not be infinite. The world flows from the infinitude and goodness of the Real for to speak of goodness is to speak of manifestation, effusion, or creation and to speak of infinity is to speak of all possibilities including that of the negation of the Principle in whose direction the cosmogonic process moves without ever realizing that negation completely, for that total negation would be nothingness pure and simple.

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Since the world or manifestation or creation issues from that Reality which is at once Absolute, Infinite, and Perfection or Goodness, these Hypostases of the Real or the Divine must be also reflected in the manifested order. The quality of absoluteness is reflected in the very existence of things, that mysterious presence of each thing which distinguishes it from all other things and from nothingness. Infinitude is reflected in the world in diverse modes in space which is indefinite extension, in time which is potentially endless duration, in from which displays unending diversity, in number which is marked by endless multiplicity, and in matter, a substance which partakes potentially of endless forms and divisions. As for Goodness, it is reflected in the cosmos through quality itself which is indispensable to existence however eclipsed it might become in certain forms in the world of multiplicity which are removed as far as possible from the luminous and

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[224] This is the view of the Advaita Vedanta in Hinduism and of the transcendent Unity of Being *(Wahdat al-wujud)* in Sufism which, because of the myopia of a reason divorced from the sanctifying rays of the Intellect, have been often mistaken for Pantheism. See Nasr, *Three Muslim Sages*, Cambridge, Mass., 1964, pp. 104-8; also T. Burckhardt, *Introduction to Sufi Doctrine,* pp. 28-30.

essential pole of manifestation. Space which preserves, time which changes and transforms, form which reflects quality, number which signifies indefinite quantity and matter which is characterized by limitless substantiality are the conditions of existence of not only the physical world but the worlds above reaching ultimately the Divine Empyrean and the Divine Hypostases of Absoluteness, Infinity, and Perfection themselves.

Moreover, each of the Divine Hypostases is reflected in a particular manner in the five conditions of existence. Absoluteness is reflected in space as centre, in time as the present moment, in matter as the ether which is the principle of both matter and energy, in form as the sphere which is the most perfect of forms and generator of all other regular geometric forms that are potentially contained in it, and in number as unity which is the source and principle of all numbers. Infinitude is reflected in space as extension which theoretically knows no bound, in time as duration which has logically no end, in matter as the indefiniteness of material substantiality, in form as the unlimited possibility of diversity, and in number as the limitlessness of quantity. As for Perfection, it is reflected in space as the contents or objects in space reflecting Divine Qualities and also as pure existence which as the Sufis say is the "Breath of the Compassionate" (*nafas al-rahman*), in space and time likewise as shapes and events possessing quality, in form as beauty and in number as that qualitative aspect of number always related to geometric forms which is usually associated with the idea of Pythagorean number. *Scientia sacra* see these aspects of cosmic existence as reflection upon the plane or the multiple planes of manifestation of the Supreme Hypostases of Absoluteness, Infinitude, and Goodness which characterize the Real as such. It also sees each of these conditions of existence as reflecting directly an aspect of the Divinity: matter and energy the Divine Substance, form the Logos, number the Divine Unity which is inexhaustible, space the infinite extension of Divine Manifestation, and time the rhythms of the universal cycles of existence which the Abrahamic traditions allude to in passing as for as their official, formal theologies are concerned and which Hinduism highlights, referring to them as days and nights in the life of Brahma.

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The Ultimate Reality which is both Supra-Being and Being is at once transcendent and immanent. It is beyond everything and at the very heart and centre of man's soul. *Scientia sacra* can be expounded in the language of one

as well as the other perspective. It can speak of God or the Godhead, Allah, the Tao, or even nirvana as being beyond the world, or forms or *samsara*, while asserting ultimately that nirvana is *samsara*, and *samsara*, *nirvana*. But it can also speak of the Supreme Self, of Atman, compared to which all objectivization is *maya*. The Ultimate Reality can be seen as both the Supreme Object and the Innermost Subject, for God is both transcendent and immanent, but He can be experienced as immanent only after He has been experienced as transcendent. Only God as Being can allow man to experience the Godhead as Supra-Being. The unitive knowledge which sees the world not as seperative creation but as manifestation that is united through symbols and the very ray of existence to the Source does not at all negate the majesty of transcendence. Without that majesty, the beauty of Divine Proximity cannot be beheld and integral metaphysics is fully aware of the necessity, on its own level, of the theological formulations which insist upon the hiatus between God and man or the Creator and the world. The metaphysical knowledge of unity comprehends the theological one in both a figurative and literal sense, while the reverse is not true. That is why the attainment of that unitive knowledge is impregnated with the perfume of sanctity which always strengthens the very foundations of the religion with which the formal theology in question is concerned, while the study of formal theology can never result in that *scientia sacra* which simply belongs to another dimension and which relies upon another aspect of the functioning of the Intellect upon the human plane.

Metaphysics does not only distinguish between the Real and the apparent and Being and becoming but also between grades of existence. The hierarchic nature of reality is a universal assertion of all traditions and is part and parcel of their religious practices as well as their doctrines, whether conceived in terms of various hosts and orders of angels as described in the famous *Celestial Hierarchies* of Dionysius, or levels of light and darkness as in certain schools of Islamic esoterism, or as various orders of gods and titans as in religions with a mythological structure such as Hinduism. Even in Buddhism for which the Supreme Principle is seen as the Void or Emptiness rather than Fullness, the vast intermediate worlds are depicted with remarkable power and beauty in both Buddhist cosmological texts and Buddhist art. The emphasis upon the hierarchic structure of reality in traditional doctrines is so great that a famous Persian poem states that he

who does not accept the hierarchy of existence is an infidel (*zindiq*).[225] Here again *scientia sacra* which is concerned with the nature of reality is distinguished from theology as usually understood, which can reality based on God and man without emphasis upon the hierarchy of existence, although even in theology many schools have not failed to take into consideration the existence if not always the full significance of the intermediate planes of reality.[226]

The relation between the various levels of reality or hierarchy of existence cannot be fully understood without taking into consideration another important notion found in one way or another in all the complete expressions of the *scientia sacra*, this notion being that of necessity to which is contrasted the notion of possibility. The distinction between necessity and possibility is the cornerstone of the philosophy of Ibn Sina (Avicenna) who has been called the "philosopher of being" and father of medieval ontology.[227] But the significance of both of these terms is of a purely metaphysical order and cannot be limited to the philosophical realm, even if this be traditional philosophy. It is the fruit of intellection rather than ratiocination as are in fact many of the tenets of traditional philosophy which veil in a syllogistic grab intuitions of a purely metaphysical nature. The presence of the notions of necessity and possibility in both Hindu and Far Eastern doctrines point in fact to realities of a universal order not at all limited to one particular mode of exposition or school of metaphysics.

Necessity is opposed to possibility conceptually but, if the meaning of possibility is understood fully, it will be seen that in one sense it complements necessity and is opposed to necessity only in one of its meaning. The root of possibility is related to potentiality and also "puissance," all three words being derived from posse, which means, "to be able to." Possibility has in fact two meanings: one, the quality or character of something that can exist or not exist; and two, the quality or character of

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[225] *gar farq i maratib na kuni zindiqi*

[226] In Islam such a widespread theological school as Ash'arism is characterized by its rejection of the hierarchy of existence in conformity with its atomistic and voluntaristic point of view.

[227] On this question see Nasr, *An Introduction to Islamic Cosmological Doctrines*, chap. 12, "The Anatomy of Being." In Arabic "necessity" is *wujub* and "possibility" *imkan*, which in the context of Avicennan ontology we translate as "contingency".

something which has the power and capability to perform or carry out an act. In the first sense the quiddities of things are possible, or contingent; an object can exist or not exist and there is no logical or metaphysical contradiction whether, let us say, a horse exists or not. In this sense but on a higher level, the archetypes or what Islamic metaphysics call *al-'ayan al-thabitah* or "immutable essence"[228] are also possible beings, only God being necessary. Taken in this meaning of the term, possibility is opposed to necessity while things which do exist and therefore must exist have become necessary not through their own essence but through the Necessary Being which alone is necessary in Itself. That is why, to use the language of Islamic philosophy again, they are called *al-wajib bi 'l-ghayr*, literally "that which is made necessary by other than itself," the "other" being ultimately the Necessary Being.

In the second sense of the meaning of possibility as power, it is not opposed to necessity but complements it as far as the Principle is concerned. God is Absolute Necessity and Infinite Possibility, the omnipotence of God reflected in the Divine Attribute *al-Qadir* in the Qur'an, meaning exactly possibility in this second sense. Whatever happens in this world is according to the Will of God but also in conformity with a Divine Possibility. God could not will what is not possibility in this sense for He would then negate His own Nature. Whatever claims a blind type of religious voluntarism might make, God's omnipotence cannot contradict His Nature and when the Gospel claims, "With God all things are possible," it is referring precisely to this Infinite Possibility of God.

Each world brought into being corresponds to a Divine Possibility and gains existence through the Divine Will which operates on different levels, sometimes appearing as contradictory to be eyes of the earthly creature. But there is never anything arbitrary about what God wills; His wisdom complements His Will and His Nature remains inviolable.

As far as necessity is concerned, it can be said that although the medieval philosophers called pure Being the Necessary Being, strictly speaking only the Beyond Being or Ultimate Reality is necessity in Itself and necessary with respect to Itself. Being is necessary vis-à-vis the world so that from the point of view of the world or of multiplicity, it can be legitimately

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[228] On the immutable essences see T. Burckhardt, *Introduction to Sufi Doctrine,* pp. 62-64.

considered as the Necessary Being. But Being can also be considered as Possibility as such which must be distinguished from the possibilities which are qualities of Being. These qualities possess two aspects: they are contingent or possible in relation to the Principle or Essence, that is, they can exist or not exist, and they are necessary in their content and so participate in the necessity of the Essence. From the consideration of these two aspects one can see that there are two kinds of possibilities: those which reflect necessity and those which reflect contingency. The first kind engenders objects which definitely exist and the second those which can possibly not exist.

God gives existence to possibilities which are so many reflections and reverberations of Being and from this breathing of existence upon the quiddities of possibilities the world and, in fact, the myriad of worlds are born. That Divine Relativity or *maya*, as it is projected toward nothingness and away from the Source, produces privative modalities and inversions of these possibilities whose origin is positive reflection and inversion, polarization of light and casting of shadows, luminous Logos and dark Demiurge. Being as Possibility is Itself the supreme veil of the Reality which in Itself is not only Infinite but also Absolute, that Essence which is beyond all determination.[229]

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In short this type of "study" of the cosmos in the traditional context is the contemplation of certain natural forms as reflecting Divine Qualities and the vision of the cosmos *in divinis*. This perspective is based on the power of forms to be occasions for recollection in the Platonic sense and the essential and of course not substantial identity of natural forms with their paradisal origin. Spiritual realization based on the sapiential perspective implies also this "metaphysical transparency of natural forms and objects" as a necessary dimension and aspect of "seeing God everywhere." In reality the traditional cosmological sciences lend themselves to being such a support for

[229] "Nous pouvons discerner [dans l'absolument Réel] une tridimensionalité, elle aussi intrinsèquement indifférenciée mais annonciatrice d'un déploiement possible: ces dimensions sont l'"Être' la 'Conscience', la 'Félicité'. C'est en vertue du troisième élément-immuable en soi-que la Possibilité divine déborde et donne bien, 'par amour', àce mystère d'estériorisation qu'est le Voile universel, don't la chine est faite des mondes, et la traine, des êtres." Schuon, "Le problème de la possibilité," in *Du Divin à l'humain*.

contemplation besides making available a veritable science of various realms of the cosmos. What is in fact traditional cosmology but a way of allowing man to contemplate the cosmos itself as an icon! Therefore, both types of knowledge of the cosmos, as viewed from the perspective of sacred knowledge and through eyes which are not cut off from the sanctifying rays of the "eye of the heat," reveal the cosmos as theophany. To behold the cosmos with the eye of the intellect is to see it not as a pattern of externalized and brute facts, but as a theatre wherein are reflected aspects of the Divine Qualities, as the theophany of that Reality which resides at the Centre of the being of man himself. To see the cosmos as theophany is to see the reflection of one-Self in the cosmos and its forms.[230]

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In Islam the correspondence between man, the cosmos, and the sacred book is central to the whole religion. The sacred book of Islam is the written or composed Qur'an (*al-Qur'an al-tadwini*) as well as the cosmic Qur'an (*al-Qur'an al-takwini*). Its verses are called *ayat* which means also signs or symbols to which the Qur'an itself refers in the verse "We shall show them our portents upon the horizon [*afaq*] and within themselves [*anfus*], until it be manifest unto them that it is the truth" (XLI; 53). The *ayat* are the Divine Words and Letters which comprise at once the elements of the Divine Book, the macrocosmic world and the inner being of man. The *ayat* manifest themselves in the Holy Book, the horizons (*afaq*) or the heavens and earth and the soul of man (*anfus*). To the extent that the *ayat* of the sacred book reveal their inner meaning and man's outer faculty and intelligence become wed once again to the inner faculties and the heart, and man realizes his own being as a sign of God, the cosmos manifests itself as theophany and the phenomena of nature become transformed into the *ayat* mentioned by the Qur'an, the *ayat* which are none other than the *vestigia Dei* which an Albertus Magnus or John Ray sought to discover in their study of natural forms.[231] Likewise, the theophanic aspect of virgin nature aids in man's discovery of his own inner being. Nature is herself a divine revelation with its own

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[230] On the theme of seeing he Divine Presence in all things see Schuon, "Seeing God Everywhere," in his *Gnosis*, *Divine Wisdom,* pp. 106-21.

[231] S. H. Nasr developed this idea extensively in our various works on the Islamic sciences esp. *An Introduction to Islamic Cosmological Doctrines*, prologue; *Science and Civilization in Islam*, p. 24; and *Ideals and Realities of Islam*, pp. 54ff.

metaphysics and mode of prayer, but only a contemplative already endowed with sacred knowledge can read the gnostic message written in the most subtle manner upon the cliffs of high mountains, the leaves of the trees,[232] the faces of animals and the stars of the sky.

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PART– III

MODERN SCIENCE—A FEW CRITIQUES

1-*Light and its Speed*

We know that the discovery of the fact that the speed of light, when measured both in the direction of the rotation of the earth and in the direction opposite to that rotation, is invariable, has confronted modern astronomers with the alternative either of accepting the immobility of the earth or else of rejecting the usual notions of time and space. Thus it was that Einstein was led into considering space and time as two relative dimensions, variable in function of the state of movement of the observer, the only constant dimension being the speed of light. The latter would everywhere and always be the same, whereas time and space vary in relation to one another; it is as if space could shrink in favour of time, and inversely.

If it be admitted that a movement is definable in terms of a certain relationship of time and space, it is contradictory to maintain that it is a movement, that of light, that measures space and time. It is true that on a quite different plane—when it is a question of the intelligible light—the image of light 'measuring' the cosmos and realizing it thereby is not devoid of deep meaning. But what we have in view here is the physical order, which alone is considered, and with good cause, by Einstein's theory; it is therefore in this context that we will put the following question: what is this famous 'constant number' that is supposed to express the speed of light? How can movement having a definite speed—and its definition will always be a relationship between space and time—itself be a quasi-'absolute' measure of these two conditions of the physical world? Is there not here a confusion between the principal and quantitative domains? That the movement of light

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[232] According to a famous Persian Sufi poem by Sa'di,

Upon the face of every green leaf is inscribed
For the people of perspicacity, the wisdom of the creator

is the fundamental 'measure' of the corporeal world we willingly believe, but why should this measure itself be a number, and even a definite number? Moreover, do the experiments, which are supposed to prove the constant character of the speed of light, really get beyond the earthly sphere, and do they not imply both space and time as usually imagined by us? Thus '300,00 km per second' is stated to be the speed of light, and it is held that here is a value which, if it be not necessarily everywhere expressed in this manner, does nonetheless remains constant throughout the physical universe. The astronomer, who counts, by referring to the lines of the spectrum, the light-years separating us from the nebula of Andromeda, supposes without more ado that the universe is every-where 'woven' in the same manner. Now, what would happen if the constant character of the speed of light ever came to be doubted—and there is every likelihood that it will be sooner or later—so that the only fixed pivot of Einstein's theory would fall down? The whole modern conception of the universe would immediately dissolve like a mirage.

2-*Matter*

In conformity with the mathematical schematism, matter itself is conceived as being discontinuous, for atoms, and their constituent particles, are supposed to be even more isolated in space than are the stars. Whatever the current conception of the atomic order may be—and theories on this subject change at a disconcerting speed—it is always a case of groupings of corporeal 'points'.

Let us here recall the traditional doctrine of matter:[233] it is from the starting-point of 'first matter' that the world is constituted, by successive differentiation, under the 'non-acting' action of the form-bestowing Essence; but this *materia prima* is not tangible matter, it underlies all finite existence, and even its nearest modality, *materia signata quantitate*, which is the basis of the corporeal world, is not manifested as such. According to a most judicious expression of Boethius,[234] it is by its 'form'—in other words, its qualitative aspect—that a thing is known, 'form being like a light by means of which we know what a thing is'. Now *materia* as such is precisely that which is not yet formed and which by that very fact eludes all distinctive knowing. The world

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[233] Rene Guenon, *The Reign of Quantity*, (Penguin, 1972), Ch. 2, rpt. (Lahore: Suhail Academy, 1988).

[234] *De Unitate et Uno*

that is accessible to distinctive knowledge thus extends between two poles that are unmanifested as such (the form-bestowing Essence and undifferentiated *materia*) just as the range of colours in the spectrum unfolds through the refraction of white—and therefore colourless—light in a medium that is also colourless.

Modern science, which despite its pragmatism is not behindhand in claiming to complete and comprehensive explanation of the sensible universe, strives to reduce the whole qualitative richness of this universe to a certain structure of matter, conceived as a variable grouping of minute bodies, whether these be defined as genuine bodies or as simple 'points' of energy. This means that all the 'bundles' of sensible qualities, everything that constitutes the world for us, except space and time, have to be reduced, scientifically speaking, to a series of atomic 'models' definable in terms of the number, mass, trajectories, and speeds of the minute bodies concerned. It is obvious that this reduction is in vain, for although these 'models' still comprise certain qualitative elements—if only their imaginary spatial form—it is nonetheless a question of the reduction of quality to quantity—and quantity can never comprehend quality.

On the other hand, the elimination of the qualitative aspects in favour of a tighter and tighter mathematical definition of atomic structure must necessarily reach a limit, beyond which precision gives way to the indeterminate. This is exactly what is happening with modern atomist science, in which mathematical reflection is being more and more replaced by statistic and calculations of probability, and in which the very laws of causality seem to be facing bankruptcy. If the 'forms' of things are 'light', as Boethius said, the reduction of the qualitative to the quantitative can be compared to the action of a man who puts out all the light the better to scrutinize the nature of darkness.!

3-*Critical Overview*

During the last few years so many critiques have been written of modern science and its recent handmaid, technology,[235] that one hardly needs to go

[235] It is really only since the early decades of the nineteenth century that technology in the West has become wed closely to modern science and has constituted its direct application. Before this relatively recent past, science and technology followed two very different courses with few significant reactions between them.

once again into all the arguments ranging from the ecological and demographic to the epistemological and theological. But to bring out fully the meaning of the traditional sciences of nature and the significance of the cosmos as theophany, it is necessary to recapitulate the main points of criticism made of modern science by the traditional authorities and from the traditional point of view. The first point to assert in order to remove all possible misunderstanding is that the traditional criticism against modern science are not based on sentiments, fanaticism, illogicality, or any of the other terms with which anyone who criticizes modern science is usually associated. The traditional critique is based on intellectual criteria in the light of the metaphysical truth which alone can claim to be knowledge of a complete and total nature.[236] That is why traditional authors never deny the validity of what modern science has actually discovered provided it is taken for what it is. The knowledge of any order of reality is legitimate provided it remains bound to that order and within the limits set upon it by both its method and its subject matter. But this would in turn imply accepting another science or manner of knowing which, being of a more universal nature, would set the boundary within which that science could function legitimately.

Herein lies the first and foremost criticism of modern science. In declaring its independence of metaphysics or any other science, modern science has refused to accept the authority which would establish the boundary for its legitimate activity. That is why despite all the pious platitudes and even well-intentioned and earnest pleading of honest scientists, modern science does transgress beyond the realm which is properly its own and serves as background for monstrous philosophical generalizations which, although not at all scientific but scientistic, feed upon the tenets and findings of the sciences and the fact that modern science has signed its declaration of independence from metaphysics. Moreover, by token of the same fact, the metaphysical significance of scientific discoveries remains totally neglected by the supposedly scientifically minded public

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[236] For traditional critiques of modern science see Guénon, "Sacred and Profane Science", *Crisis of the Modern World*, (Lahore: Suhail Academy, 2002); Schuon, *Language of the Self*, chap. 10; idem, *In the Tracks of Buddhism*, chap. 5; Lord Northbourne, *Religion in the Modern World*, London, 1963 rpt. (Lahore: Suhail Academy, 1998), esp. chap. 5; and F. Brunner, *Science et réalité*, Paris, 1954.

which usually knows very little about science but is mesmerized by it. And here again, despite the loud protests of some reputable scientists, instead of the metascientific significance of what science has actually discovered becoming revealed, the reverse process takes place whereby, through wild interpolations and usually well-hidden assumptions, metaphysical truths become rejected in the name of scientific knowledge. What tradition opposes in modern science is not that it knows so much about the social habits of ants or the spin of the electron but that it knows nothing of God while functioning in a world in which it alone is considered as science or objective knowledge.

This divorce of science from metaphysics is closely related to the reduction of the knowing subject to the cogito of Descartes. It is usually forgotten that despite all the changes in the field of modern physics, the subject which knows, whether the content of that knowledge be the pendulum studied by Galileo or wave functions of electrons described mathematically by de Broglie, is still that reason which was identified by Descartes with the individual human ego who utters cogito. The other modes of consciousness and manners of operation of the mind are never considered in modern science. The findings of that reason which is wed once again to the Intellect and that mind which is illuminated by the light of the "eye of the heart" is not considered as science at all, especially as this term is used in the English language. Hence, the irrevocable limitation of a science caught with in the mesh of the functioning of only a part of the human mind but dealing with a subject of vast import which it then seeks to solve in manners that are characteristically "unscientific," namely, intuition, artistic beauty, harmony, and the like. Many first-rate scientists, in contrast to most philosophers of science, would in fact accept our contention that, if one considers all that which is called science has achieved even in modern times, one cannot speak of the "scientific method" but has to accept the assertion that science is what scientists do, which might include playing with possibilities of musical harmony to solve certain physical problems.

Despite the reality of this assertion, however, the rationalism inherent in what the modern world considers to be science continues and had has its lethal effect upon the humanities, the social sciences, and even philosophy and theology. Strangely enough, precisely because of the inherent limitation of the original epistemological premises of modern science, more and more

modern science has come to see in the objective world not what is there but what it has wanted to see, selecting what conforms to its methods and approaches and then presenting it as the knowledge of reality as such. Modern men, influenced by science, think that according to the scientific point of view one should only believe what one can see, whereas what has actually happened is that science has come to see what it believes according to its *a priori* assumptions concerning what there is to be seen.[237] This epistemological limitation combined with the lack of general accessibility in the West since the rise of modern science to that scientia sacra of which we have spoken, has prevented this science from being integrated into higher orders of knowledge with tragic results for the human race. In fact, only a high degree of contemplative intelligence can enable man to look upon the sun and see at once the visible symbol of the Divine Intellect and an incandescent mass diffusing energy in all directions.

These limitations of modern science are to be seen also in its neglect of the higher states of being and its treatment of the physical world as if it were an independent order of reality. This neglect of the unmanifested and in fact non-physical aspects of reality has not only impoverished the vision of cosmic reality in a world dominated by scientism, but it has caused confusion between vertical and horizontal causes and brought about incredible caricatures of the cosmic reality as a result of relegating to the physical domain forces and causes which belong to higher orders of existence. It is not accidental that the more physics advances in its own domain, the more does it become aware of its need for another complete paradigm which

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[237] "Modern man was not—and is not—"intelligent" enough to offer intellectual resistance to such specious suggestions as are liable to follow from contact with facts which, though natural, normally lie beyond the range of common experiences; in order to combine, in one and the same consciousness, both the religious symbolism of the sky and the astronomical fact of the Milky Way, an intelligence is required that is more than just rational, and this brings us back to the crucial problem of intellection and, as a further consequence, to the problem of gnosis and esoterism… Howbeit the tragic dilemma of the modern mind results from the fact that the majority of men are not capable of grasping *a priori* the compatibility of the symbolic expressions of tradition with the material observations of science; these observation incite modern man to want to understand the 'why and where' of all things, but he wishes this 'wherefore' to remain as external and easy as scientific phenomena themselves, or in other words, he wants all the answers to be on the level of his own experiences: and as these are purely material ones, his consciousness closes itself in advance against all that might transcend them." Schoun, *Language of the Self*, p. 226-27.

would take into consideration domains of reality that many physicists feel almost intuitively to exist, but which have been case aside from the world intuitively to exist, but which have been cast aside from the world view of classical and modern physics.[238]

The neglect of the multiple levels of existence by the modern scientific perspective has forced the exponents of this science to take recourse to belief in the uniformity of "law of nature" over long periods of time and expanses of space. This theory which is called "uniformitarianism" and which underlies all those geological and paleontological speculations which speak of millions of years past was rapidly promoted from the status of hypothesis to that of "scientific law"; and when most honest scientists are asked on what basis do they believe that the laws of nature, the so-called constants of the law of gravitation, the law of electromagnetic theory or quantum jumps have always been the same, they answer that since there is no other choice they have adopted the uniformitarian thesis. Actually from the modern scientific point of view itself there is of course no other way of speaking about what was going on in the planetary systems eons ago except by considering the laws of physics to be uniform and simply admitting that this science cannot provide an answer to such questions without extrapolating cosmic and natural laws back into earlier periods of time or into the future. Of course it is not the physical conditions which modern science assumes to have been the same but the laws and forces which bring about different physical conditions at different times while supposedly remaining uniform themselves. As for as these laws and forces are concerned, whatever means are employed by modern science to check whether or not there were changes in such laws and forces in the past are themselves based on the condition of the uniformity of the laws and forces used to carry out the process of checking. A science aware of its limits would at least distinguish between what it means to say that the specific weight of aluminium is such and such or how many protons are found in the nucleus of a helium atom and to claim that such and such an astronomical event occurred 500 million years ago or a particular geological formation was formed so many millions or even billions of years ago. One wonders what exactly the word year means in such a

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[238] The attraction toward Oriental teachings about nature alluded to above is related to this same phenomenon. On the interest of contemporary physics in the traditional esoteric and mystical views of the universe see M. Talbot, *Mysticism and the New Physics*, New York, 1981.

statement and what assumptions are made upon the nature of reality to give the kind of definition of years which is usually given when a question such as this is posed to a scientist.

What is most unfortunate from the traditional point of view in this presumptuous extrapolation of physical laws to include long stretches of time, and in fact all time as such, is that it results in the total neglect and even negation of cosmic cycle. The denial of the traditional doctrine of cycles or even one cycle which ends with the majestic and tremendous events described in all sacred scriptures and associated with eschatology is one of the greatest shortcomings of modern science because it has made eschatology to appear as unreal. It has helped destroy in the name of scientific logic, but in reality as a result of a presumptuous extrapolation based on metaphysical ignorance, the reality of that vision of ultimate ends which gives significance to human life and which over the ages has had the most profound effect upon the behaviour of man as an ethical being. It has also destroyed in the minds of those affected by scientism the grandeur of creation and the meaning of the sacrifice of primordial man. That is why this science has been so impervious to the amazing harmony that pervades the heavens and the earth. Where does this harmony come from? This question, which is metaphysical but which has profound scientific consequences, has been left unanswered as a result of the hypothesis of uniformitarianism which is metaphysically absurd but which passes as scientific law as a result of the loss of vision of the hierarchic universe and understanding of cosmic rhythms.

Also, closely related to this loss of the awareness of the vertical dimension of existence, is the reductionism so characteristic of modern science which we have had occasion to mention already in conjunction with the process of the desacralization of knowledge. From the point of view of *scientia sacra*, this reductionism is the inversion of the traditional doctrine according to which each higher state of existence "contains" the lower, the Principle containing the root of all that is real in all realms of metacosmic and cosmic existence. In this reversal of the normal rapport between grades of being, the Spirit is reduced to the psyche, the psyche to biological form, living forms to aggregates of material components, etc. Of course one cannot lay the responsibility for all the levels of this reductionism at the feet of physics; but even on the nonmaterial levels, the effect of a purely

phenomenal science wed to the sensually verifiable is to be observed, as, for example, the reduction of the Spirit to the psyche so characteristic of the modern world and concern with proofs of the existence of not only the psychic but also the spiritual through various experiments which indirectly emulate the physical sciences.[239]

That is why there is and there must be another science of nature which is not metaphysics or *scientia* sacra itself but its application to the realm of nature. Such a science would not exclude what is positive a modern science but would not be bound by its limitations.[240] It could not veil but reveal the theophanic character of the cosmos and that the knowledge of the sensible domain to higher levels of reality and finally to Reality as such. It would be a science whose matrix would be the Intellect and not the dissected *ratio* associated with the Cartesian *cogito*. Such a science existed already in traditional civilizations and embraced *their* sciences of the sensible order which in many cases were of considerable breadth and depth. Its principles are still to be found in *scientia sacra* from which could be created a science to embrace and integrate the sciences of nature of today once they are shorn of the rationalistic and reductionist propositions, which do not have to be their background, but which have accompanied them since their birth during the Scientific Revolution. Only such an embrace can nullify the disruptive and, in fact, dissolving effect of a partial knowledge which parades as total knowledge or is paraded by others as such. Those "other" include not only scientistic philosophers but many philosophers and historians of science infected by a dogmatic positivism[241] and a number of modern mystifiers and

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[239] It is the allure of empiricism which draws so many people to various kinds of spiritualism, magnetism, occultism, etc., where the supernatural is "proven" through phenomenal evidence. Although certain experiments in parapsychology have certainly demonstrated that here is more to reality than meets the eye and that the so-called scientific world view of a limited material-energy complex as the ultimate ground of all that constitutes reality cannot be sustained, no phenomenal evidence can prove the reality of the Spirit which lies beyond all phenomena and belongs to the realm of the noumena.

[240] "C'est pourquoi it faut qu'il exise une autre science que la science moderne. Cet autre type de connaissance du monde n'exclut pas la science sous sa forme actuaelle, si l'on envisage la perfection pour qui sous-tend et justifie dans une certaine mesure la pensée technique elle-même: la science veritable laisse subsister la science moderne comme une manifestation possible de l'esprit en nous." Brunner, *op. cit.*, p. 208-9.

[241] It is important to note that the founders of the discipline of the history of science, who were all either outstanding historians of thought or philosophers of science, were, with the

pseudognostics who, instead of integrating science into the gnostic vision, have mutilated the verities of gnosis into a pseudoscientific science fiction which is no more than another way of generalizing the partial knowledge represented by modern science into total knowledge, but with esoteric pretensions.[242] This other science which is traditional in the most profound sense of implying a transmission in conformity with the destiny of the person who is able to possess such a knowledge[243] cannot but manifest itself when *scientia sacra* becomes a reality once again, because it is none other than the application of this supreme form of knowledge to the cosmic realm.

The spiritual man, whose mind is sanctified by the Intellect and whose outward eyes have gained a new light issuing from the eye of the heart, does not even see himself in such a dichotomy. He is always on nature's side for

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exception of the much neglected P. Duhem, positivists. As a result, an invisible positivist air still dominates the mind of the scholars of this discipline despite several important exceptions such as A. Koyré, G. Di Santillana and, among the younger generation, N. Siven and A. Debus. What is of special interest is that this positivism becomes rather aggressive when the question of the Oriental sciences and their metaphysical significance comes to the fore. That is why so few studies of the Oriental sciences which would reveal their significance as being anything more than quaint errors on the path of human progress have come out of those dominated by the tacit positivism of this discipline, no matter how learned they might be. S. Jaki in his *The Road of Science and the Ways to God*, Chicago, 1978, has referred to this positivism in connection with its neglect o the role of Christian elements such as a Creator whose will rules over an orderly universe. Although we do not agree with his appreciation of Western science as a positive result of the particular characteristics of Christianity, we certainly share his concern for the limitations imposed upon the discipline of the history of science by the positivism of its founders.

[242] The work by R. Ruyer, *La Gnose de Princeton: des savants à la recherché d'une religion*, Paris, 1974, supposedly by the group of scientists at Princeton interested in gnosis but most likely the thoughts of one person using a fictitious group, is an example of this kind of phenomenon. The thirst for sacred knowledge in the contemporary world is such that this work became popular in France where, during recent years, many pseudognostics and pseudo esoteric works by scientists have seen the light of day.

[243] Traditions emphasize that this knowledge, although attainable, is not attainable by everyone because not does preparation but can be taught only to the person who possesses the capability and nature to "inherit" such a knowledge. That is why some of the Muslim authorities like Sayyid Haydar Amuli refer to it as inherited knowledge (*al-'ilm al-mawruthi*) which they contrast with acquired knowledge (*al-'ilm al-iktisabi*). See Corbin, "Science traditionnelle et renaissance spirituelle," *Cahier de l'Université Saint Jean de Jérusalem* 1 (1974): 39ff.

he sees in her the grand theophany which externalizes all that he inwardly. He sees in the forms of nature the signatures of the celestial archetypes and in her movements and rhythms the exposition of a metaphysics of the highest order. To such a person nature is at once an aid to spiritual union, for man needs the world in order to transcend it, and a support for the presence of that very reality which lies at once beyond and within her forms created by the hands of the Supreme Artisan. To contemplate the cosmos as theophany is to realize that all manifestation from the One is return to the One, that all separation is union, that all otherness is sameness, that all plenitude is the Void. It is to see God everywhere.

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ISLAM AND SCIENCE: A REVIEW ARTICLE

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REVIEWED BY MUHAMMAD SUHEYL UMAR.

Religion is relevant to the chief concerns of our century. It can no longer be assumed with impunity that religion was a primitive superstition outgrown by civilised, rational man. One has also to take into account the fact that contemporary mind is science-ridden and for it science has become a sacral mode of knowing, the court of ultimate appeal for what is true, occupying today almost exactly the place that Revelation enjoyed in the West in the Middle Ages and in the East fairly recently. Through a misreading of science, our contemporary mindset suffers from a loss of faith in transcendence, in a reality that encompasses but surpasses our quotidian affairs. The loss is considered to be serious, and also (ironically) unnecessary, for our loss of the Transcendent World has resulted from a conceptual mistake. We assume that the modern world has discovered something that throws the transcendent world into question, but that is not the case. It is not that we have discovered something. Rather, we have lost sight of something. For reasons that are completely understandable but nonetheless regrettable, we have unwittingly allowed ourselves to be drawn into an enveloping epistemology that cannot handle transcendence.

Science studies the empirical world. Religion seeks to understand and bind us to the entire scheme of things in which God is pre-eminent. There can not be any conflict between the two if, and when, each sticks to its proper task. A conflict arises when either oversteps its proper limits. Religion does this if / when it interferes with science's attempts to understand the empirical world, the physical world of nature. Science oversteps its limits if / when it claims to be able to access, and give definitive answers (without the help of religion) to ultimate questions, such as who are we, how did we get here, what is the meaning of life, and is there life after death? Historically, both have overstepped their proper bounds. In the West, theologians were guilty of this

when (in the 16-17th centuries) they interfered with scientific pursuits. Now the shoe is on the other foot. Today, most of the transgressions come from science's side.

Muzaffar Iqbal's latest work *Islam and Science* is informed by the awareness that the impact of issues at the interface of science and religion reverberates worldwide and across disciplines and the forces driving this impact are diverse: accelerated development of science and technology; globalization of scientific culture; religious responses to new scientific visions of the universe; and ethical concerns prompted by biotechnology and environmental threats. It is also informed by the fact that scientists and religious intellectuals are trying world over to tear down the cultural walls that have served to quarantine their respective disciplines and address these challenges together and that the science and religion dialogue draws scientists, theologian, philosophers, ethicists, historians and religious leaders into a single community of scholars. It realizes that a religious science may not be possible but we can have a science that is completely compatible with religion. Science may dispense with religion but human beings cannot. The rightful provinces of activity of science and religion can be distinguished so that they should complement each other— fit together like the pieces of a jigsaw puzzle— in providing us with a comprehensive view of whole of reality insofar as such a view is humanly attainable. This was the case with the Islamic civilization until its encounter with modern science and its worldview in circumstances that, to say the least, were not favourable.

Islam and Science takes a long sustained look at the relationship between Islam and science. With that end in view Muzaffar Iqbal has told the story of Islam and science from its beginning, through its entire vicissitudes, leading up to the present arena of debates and debacles where contending trends and agendas collide and a new nexus, a liberated discourse awaits to emerge. He has told it intelligently and in a thorough going manner with the benefit of hindsight which makes it possible to rise above the level of immediate practical responses and to consider the issues at stake with clarity of vision and objectivity. Years of research and hard work in his chosen domain of scholarship come to fruition with *Islam and Science* which is informed, first and foremost, by the realization that as a transplant, modern science raises a different set of questions for the Islamic tradition from that which forms the

core of the discourse between Christianity and modern science, though there is bound to be some overlap. These questions are also different from those which arose naturally within the Islamic scientific tradition during the centuries when it was a living tradition. These new questions require a new methodology and a new language of discourse. It is also informed by the vision that Islam and Science discourse cannot attain any degree of authenticity without its roots going back to the Islamic scientific tradition. What was Islamic in the Islamic scientific tradition? How was this tradition rooted in the Qur'anic worldview and whatever happened to it? How does modern science differ from the Islamic scientific tradition? Equally important are the epistemological considerations concerning the status of the Qur'an in relation to modern science and the nature and meaning of the so-called scientific verses of the Qur'an. Similarly, the Islamic understanding of the physical cosmos, God's relationship to the created beings and the Islamic concept of life and its purpose are essential to any meaningful discourse on Islam and science.

First three chapters of the book, "The Beginning", "And these Are the Signs (The Qur'an and the Order of Nature)" and "Making of the Tradition", address the issue of the development of the Islamic scientific tradition and provide an excellent overview of its genesis, unfolding and eventual flowering. He starts with giving us an idea of the intellectual milieu of the early Islamic community, permeated as it was with the Qur'anic data and the formulation of the core religious sciences, which provided the cradle for the nascent Islamic scientific tradition— through the social revolution it brought about— and offers valuable information and fresh insights about the origins and early development of the Islamic scientific tradition. The first flowering of this tradition is then traced back to this social and intellectual background of *Kalam* issues, the Qur'anic data on creation and the order of nature leading to the Qur'an and science nexus, to explain the "sudden" appearance of a small group of scientists and scholars who were dealing with rather advanced theories. He rightly points out that the doctrine of *Tawhid*, the fundamental principle of Islam, acted as a prism through which all theories passed in order to test their validity but adds an interesting observation that, "It is also noteworthy that the Islamic scientific works, profoundly influenced by the Qur'anic worldview as they were, seldom mention the so-called scientific verses of the Qur'an in a direct sense. Numerous examples can be cited".

"Likewise, he says, "during the entire period of Islamic scientific activity which lasted well into the fifteenth century, we see no evidence of any scientific research program directly motivated by the desire to "prove" the scientific verses of the Qur'an through science. There is no record of such profane use of the Divine Book. This is so that the cultural milieu that gave birth to the Islamic scientific tradition was so thoroughly infused with the Qur'anic worldview and the cosmologies based on its message that there was no need for any artificial and external imposition of the Qur'anic verses on the scientific works. When al-Ghazali mentions various natural sciences in relation to the Qur'an, his method, context and purpose is entirely different from the twentieth century extraneous and ornamental use of the Qur'an as a way of Islamization of modern science."

"Making of the Tradition" is seen to have taken place amidst a rich flow of diverse cultural, philosophical and scientific currents. Built on the metaphysical foundations provided by the Qur'an and rooted in the very heart of Islamic revelation, it received the first flow of intellectual currents from the *Kalam* discourse that reflected on the Qur'anic description of God and sought ways to comprehend the Divine in human terms. Then came a torrent from the ancient centres of learning – philosophical ideas, religious beliefs, scientific facts and theories. Amidst this influx of diverse crosscurrents, the emerging tradition matured rapidly.

Important stages of this process are then spelled out in detail with a special treatment of the translation movement that flourished among these diverse cultural and intellectual currents. While explaining the contours of the tradition Muzaffar has steered clear of the pitfalls of both "reductionism" and "precursorism" that often make inroads into otherwise well informed discourses. Reductionism, in this context, refers to the "view that the achievements of Islamic scientists were merely a reflection, sometimes faded, sometimes bright, or more or less altered, of earlier (mostly Greek) examples; Precursorism, on the other hand, reads the future into the past, with a sense of elation. In the final analysis, it may be said that the historians of science are still not able to reconstruct with confidence a complete mosaic of all he currents of thought, scientific facts and the theories that came into the Islamic civilization through the highly complex phenomena of cross-cultural transmission but they are certainly able to assert that this was not a passive

reception of material into one civilization from another. Rather, it was an enormously complex but creative process that transformed the material in the very act of appropriation.

The historical background of this transformation of received materials is then skilfully portrayed through its roots, branches and connections and the final assessment of the making of the Islamic scientific tradition is no less comprehensive. "Assessed in the most general terms, the Islamic scientific tradition can be seen as having passed through the following major phases:

1. A formative period under the umbrella of Islamic religious sciences;
2. A quick maturation through the massive infusion of data, information and theories from the Greek, Indian and Persian traditions;
3. A phase of careful assessment, recasting and Islamization of the received material;
4. A gradual realization that there was something fundamentally wrong with some of the major concepts that had been received from other traditions;
5. appearance of "doubt literature" which pinpointed major scientific and philosophical problems with the received material and suggested fundamental changes; and
6. A slow process of withering."

He realizes that these six phases do not lend themselves to clearly differentiated periods because the Islamic scientific tradition covered a vast geographical region and all branches of science. What may appear to have matured in one place and time may only have begun to take roots in another region and, in many cases, the phases merged into each other, slowly and, often, imperceptibly. Their individual hues and colours only became distinct after enough time had passed from the previous phase.

His description of the fourth and the fifth phases is interesting as it brings to light the less known fact that the fourth and the fifth phases were characterized by the appearance of a new genre in the Islamic scientific literature: the *shukuh literature* i.e. the literature of doubt. Most of this "literature of doubt" is still inaccessible to the historians of science but what

has been studied shows that this genre, starting in the 9th century, was in full vogue in the 11th century. After hinting at its links with the European tradition, which again sheds new light on this obscure area of study, the author moves to explore, in the fourth chapter "Islam and Science Nexus", the connections that the Islamic scientific tradition had established with the fundamental doctrines of Islam. These connections form the core of what was Islamic in this tradition. It is important to note that these connections often remain buried under the pure scientific data with which most scientists dealt in their research but they are never absent. This subtle guiding of the scientific enterprise, as it were, had profound impact on the direction of the scientific research in the Islamic civilization as well as upon the fascinating process of the transformation of the philosophical and metaphysical underpinning of the Greek, Indian and Pahlawi scientific traditions— a transformation that made them Islamic. This is an important point often ignored or sidestepped in these discussions. Before the rise of modern science, the Islam and science discourse existed within the larger intellectual tradition of Islam and although there were many foreign currents that ran through the warp and weft of the tradition, it remained integrally linked to the Islamic worldview. This situation was to drastically change with the withering of the Islamic scientific tradition and its eventual replacement with the modern western science. These fundamental changes have altered the parameters of the Islam and science discourse and demand a different kind of exploration. Muzaffar has explored these new and emerging facets of Islam and science discourse in chapter ten. In this chapter, "Islam and Science Nexus", his exploration is directed to the relationship between Islamic and science before the rise of modern science and he has formulated important questions about the Islam and science nexus that need to be addressed in order to gain a clear idea of the nature of this nexus. What was Islamic in the Islamic scientific tradition? How did it differ from the Greek, Persian and Indian scientific traditions from which it had received a large amount of scientific data as well as theories? What were the major issues in the Islam and science discourse? Who participated in this discourse? He then draws an outline of the fundamental nexus that existed between Islam and the science it inspired taking into consideration the entire span of the Islamic scientific tradition during which this relationship saw a considerable change in many respects. He also takes into consideration the whole geographical range— from Spain to Afghanistan— covered by the Islamic scientific

tradition and explores the dynamics of the relationship between Islam and science at various historical junctures, situating his discussion within the broader social, cultural and historical milieu in which science— as a social activity— found expression. The first important point he has noted, under the title "The Internal Links", in this exploration is the very absence of Islam and science as a differentiated discipline in the Islamic intellectual tradition. No one thought of "Islam" and "science" as two separated entities that had to be related to each other through an external mechanism. This fundamental aspect of the tradition is neither accidental nor does it point to any gap in the intellectual make-up of the Islamic tradition. Rather, Muzaffar observes very rightly, it points to a profound understanding of the nature of science and its relationship to Islam. This relationship emerged naturally and because the scientific tradition was thoroughly rooted in the worldview created by Islam, no one ever thought it necessary to create an external apparatus to relate the two. This also explains for the readers why, contrary to the contemporary practice, we find no decorative uses of the Qur'anic verses in the pre-seventeenth century Islamic scientific works. He has given several examples. To quote only one, "al-Khwarazmi's famous Algebra starts with the customary invocation, *In the name of Allah, the Most Beneficent, the Most Merciful*, followed by a paragraph in which he expresses thanks to God for this bounties and for God's mercy upon human race in guiding it by sending Prophet Muhammad. After this paragraph, he describes the purpose of composing his book as being '[a book] on Calculating by [the rules of] completion and Reduction, confining it to what is easiest and most useful in arithmetic, such as men constantly require in cases of inheritance, legacies, partition, law-suits and trade and in all their dealings with one another, or where the measuring of lands, digging of canals, geometrical computation and other objects of various sorts and kinds are concerned…..' after this short introduction, he then goes directly to the subject matter." The same pattern in followed in all other major scientific texts. Although they are all firmly rooted in the Islamic worldview, no overt effort was made to lace them with the Qur'anic verses. Perhaps another reasons for this is the fact that science in the Islamic civilization was part of a larger tradition of learning that arranged different disciplines in a hierarchical structure like the branches of a tree.

Many aspects of this "Islam and Science Nexus" discussed by Muzaffar deserve special attention but we shall mention only one here. Muzaffar brings to our notice that, as in many other domains of Islamic Studies, the science religion discourse is also permeated with "Goldziherism" surfacing most often in "Islamic versus foreign Sciences" typology. Muzaffar's treatment reveals that Goldziher's thesis cannot be validated as a careful reading of the extant material *within* the context of the Islam's normative tradition shows that his backward reading of isolated texts to validate pre-conceived ideas neither sheds light on history to enhance our understanding of the subject matter nor yields solid scholarship. In his words, "it merely clouds the intellect." Islam and Science Nexus is further elucidated by looking at other aspects; "The Naturalization Thesis", Linguistic Affinities and Transformations," "Links with the Qur'anic Cosmological Sciences," "Science-Philosophy Nexus", "Ghazalian Synthesis", "Teleology: God, Cosmos and Science", "Science, Technology and Society".

The sixth phase mentioned above is explored in chapter five, "Withering of the Tradition" because the withering of the Islamic scientific tradition presents many unresolved and enigmatic challenges to historians of science. Why did the Islamic scientific tradition suffer such a fatal collapse after centuries of sustained flowering? Why did it die? How and when? In a narrow sense, these questions belong to the discipline of history of science and not to a work on Islam and science but because the relationship between Islam and science was fundamentally altered by the decline of the Islamic scientific tradition, he could not have ignored this phase of history without seriously compromising the integrity of his inquiry, especially its historical dynamics, or impairing the understanding of its impact on the relationship between Islam and science. Here is how he formulates the question:

> "There can be no two opinions about the fact that the Islamic scientific tradition withered and eventually died, at least in a practical sense, even though some remnants can still be found, especially of the Islamic medical tradition which is still a living tradition in some parts of the Muslim world, notably in the Indian subcontinent. Therefore, the first task that can establish our inquiry within a framework is to assign a date to the occurrence of the decline of the Islamic scientific tradition. But as soon as we attempt to do this, we run into difficulties that arise both

from the conceptual framework of the question as well as from the paucity of resources?

Conceptually, what do we mean by the withering, decline or death of a tradition? Obviously, it could not have been a sudden event that happened on the fourth day of the fifth month of a particular year. Hence, we should be searching for a period of time, rather than a particular date. But even in this case, we must ask: Will this period of time, which we hope to find, be universally applicable to all branches of the Islamic scientific tradition at once and in all regions of the Muslim world? After all, we are dealing with a tradition that lasted longer than the Greek or the Latin medieval or, even then modern science, as George Sarton once remarked, and that was spread over a very large geographical region. A third related question is: Did the tradition come to a cul-de-sac where it died a slow and agonizing death over a "period of time" or were there attempts to cure the malady? If yes, where were these attempts made, by whom, and did they produce any results?

In addition, we must also ask a few other related questions: Was the withering of the Islamic scientific tradition an isolated phenomenon or was it part of a general decline of the intellectual tradition to which it belonged? If it was part of a larger process of decline, then how did this larger process start and at what stage of its decay did it affect the scientific tradition? Where and when did it begin? Why? What were the social, political and economic circumstances that were responsible for this general intellectual decline, which must have spread to a large geographical region with tremendous force? Were there any early signs and corrective measures?"

Various answers to "The When Question" have been examined. Muzaffar observes that, George Sarton, in his *An Introduction to the History of Science,* "sets the eleventh century as the end of the vigour of the Islamic scientific tradition, with the twelfth century, and to a lesser extent the thirteenth century, as being the centuries of transition of the vigour to Europe. But the discovery of new texts pushed this boundary further and eventually the idea of a Golden Age was seriously challenged". Other facts discovered lately also corroborate the same conclusion. The Why Question has also been tackled in an illuminating manner, analyzing it from the perspective of the History of

Science and from the perspectives from the Sociology of Science. Muzaffar observes that in most of the studies, judgements passed on the scientific achievements of the previous civilizations are invariably based on the developments of modern science. This creates many historiographic problems and entails the danger of unconsciously slipping from the historical fact into the Whiggish view of history as if the final purpose of the cultivation of science in the other civilizations was merely to create modern science. "This approach has had two quite opposite, but equally regrettable, results," says Berggrren, "The first is a treatment of medieval Islam as a civilisation deserving of attention only for its role as a channel through which the great works of the Greeks were carried safely to the eager minds of the European Renaissance. The emphasis falls on the two great periods of translations, that into Arabic in the ninth century and that into Latin in the twelfth and thirteenth centuries, and the developments of the intervening centuries provide little more than a series of anecdotes about one curious result or another that was proved by an occasional great figure."

Muzaffar has some very pertinent remarks to offer on the general domain of sociological treatment of the "Why" question which operates on the hypothesis that the Scientific Revolution of the European type was the only possibility left to all other scientific traditions for their further development. He has examined it with reference to the question "Why did the Scientific Revolution not take place in Islam" and has successfully shown that most of the studies have embedded biases in their methodology that they apply to the question and thus suffer from the same defects, the most glaring of which is an imposition of modern western concepts on a civilisation whose goals and aims, aspirations and models vastly differed from the modern West.

The upshot is this. All the "internal factors" that could be summarized from the studies of the decline and withering of the Islamic scientific tradition suffer from a general problem: these "internal factors" were already present when the Islamic civilization gave birth to and nourished its scientific tradition. "It is unreasonable think," Muzaffar asks, "that the Islamic legal system, which came into existence in the seventh century before the emergence of the scientific tradition, would first allow a scientific tradition to flourish for six centuries and then become an impediment to the emergence of a "neutral zone of scientific inquiry in which a singular set of universal standards" could be applied"?

On his part Muzaffar has tried to explain the "Why Question" through "Perspectives from Within" situating the question within the framework of the Islamic civilization and de-linking it from the extraneous parameters. He delimits the question to lead us to find the causes for the decline of the Islamic scientific tradition situated in certain social, political and economic circumstances that contributed to the decline; rather than to some "inherent" flaws in Islam itself, which would, ironically, first allow the birth and nourishment of sciences for centuries and then strangle their further pursuit. At this point in his inquiry he draws our attention to the "General Features of the New Empires" and then proceeds to assert that all these considerations taken into account, suggest certainly not a case of a civilization at its lowest ebb! The least one can gather from this data is that there existed, during these three centuries, a set of unique circumstances common to all three centuries, a set of unique circumstances common to all three empires, the Indian Timuri, the Safavid and the Ottoman. The most striking facets of this set are neither the paucity of wealth, nor weakening of intellectual vigour, but an unusual interest in artistic expression. In his view:

> "It is in the pleasure-seeking high culture of this age, that the real causes of decline are to be found. The courts at Delhi, Istanbul and Isfahan, now captive of their extravagant routines and almost alienated from the realities of the vast empire they controlled, the couriers and the elite families who contributed so much to the decadence and absolutism of the courts and the concentration of wealth in fewer and fewer hands are the indicators of a civilization at the brink of disastrous ruin. The Islamic scientific tradition became a caricature of its past glory in these three centuries and those who had cultivated it, were replaced by those who preferred to seek pleasure in the finite realm of the senses, rather than the splendors of the spirit.
>
> When the interlude of the three centuries came to its close, and the high culture and the decadent practices felt threatened by the approach of foreign armies at their doorsteps, it was already too late. The West had achieved a decisive edge over the Muslim world through remarkable advancements in science which were quickly translated into technologies which produced superior weapons, enhanced industrial production and, most of all, a vast reservoir of energy which sought to expand their

> frontiers, both physically as well as intellectually. The future historians of Islam must divert their attention to these three centuries in order to understand the causes of decline and the withering of the Islamic scientific tradition. Those who have sought "internal causes" in the very foundations of Islam have misled these efforts for too long and with disastrous results. It is time for a total new orientation and a new search."

It is also important to mention that before it faded from the Muslim lands, a large part of the Islamic scientific tradition had been transmitted to Europe. This transmission of the Islamic scientific tradition and the subsequent transformation is an integral episode in the emergence of a new Islam and science discourse and this is the focus of his next chapter "Transmission and Transformation". The relationship between the Islamic scientific tradition and modern western science forms a crucial link in the exploration of the contemporary Islam and science discourse. Fortunately, the transmission of the Islamic scientific tradition to the West is not as obscure a subject as the transmission of the pre-Islamic traditions to the Islamic tradition. Likewise, the paths leading to the appropriation and transformation of the material received by the West are also more amenable to scrutiny, though many texts have not been studied yet and many questions remain unresolved. Muzaffar has made this part of the inquiry into the process of transmission and transformation of the Islamic scientific tradition in Europe within the larger historical context that it may yield fruitful results. He gives us a brief description of the European scientific tradition and finally explores the ultimate fate of the received material. Here, as before, he has very useful insights that he brings to bear upon t subject. Contrary to the prevalent views he has reminded the readers that the Dark Ages of the West were, after all not so "dark" as often portrayed. He then goes on to note, with regard to "Reception of the Islamic Scientific Tradition" that the received Greek and Islamic tradition first became the dominant intellectual force in the medieval West and then gave way to a new and opposing force out of which grew the worldview that was to produce modern science. Similarly he observes that, contrary to the commonly held notion prevalent in the works of many Muslim scholars, it was not the Islamic scientific tradition that had arrived in Europe to take it out of its so-called Dark ages—if anything like that ever existed. It was the inner dynamics of the European

civilisation that had created a particular need that was fulfilled by making use of the material from the Islamic scientific tradition. Even a cursory glance at what was translated makes this point abundantly clear and undoubtedly shows that the European intellectual tradition was looking for a particular type of material; that it was not interested in the Islamic tradition *per se*: rather, in the course of its development, it needed to recover its own antiquity; it found it in Aristotle's Arab home and recovered it. In this process, it came across Ibn Sina, Al-Kindi and Ibn Rushd and took them as well— not as representatives of the Islamic scientific tradition but as commentators of Aristotelian corpus. He also notices here that those whose works were translated were translated because of their importance for Aristotelian studies and not for their contributions to the Islamic scientific tradition. In order to understand the true meaning of this translation movement and its impact on the subsequent developments Muzaffar has tried to reconstruct the intellectual milieu in which these translations arrived, first as a trickle and then as a torrent. Until the twelfth century European intellectual life was relishing a peaceful but fervent expansion of the educational system. During the early part of the twelfth century, recovery of the writings of the Latin Church fathers, a few translations of Greek works (Plato's *Timaeus* and parts of Aristotle's *Logic*) and a few new translations both from Greek and Arabic quietly flowed into the main stream of the new educational activity. Next stage was "Transformation". The Islamic scientific tradition provided a large amount of data and theories to the European tradition but all of this was appropriated and eventually transformed. It was this transformed tradition that gave birth to modern science. No doubt this transformation is intimately linked to the internal dynamics of the European civilisation, but the famous "continuity debate", which has received a lot of attention within the history of Western science, links this process to the transformation of the material received from the Islamic tradition. This debate revolves around the crucial issues of "continuity" and "discontinuity" of modern science with the medieval science. One group of historians of science claims that modern science is the natural outcome of an internal process of growth of science in which the medieval science was but one step in a continuity that goes back to antiquity. The opposite camp holds that modern science has nothing to do with its medieval precursor. In between these two extremes lie a host of intermediate positions. Muzaffar agrees with Alaxandre Koyré, that what the founders of modern science did was neither

refinement, nor improvement of what they had inherited; they had to actually "destroy one world and to replace it with another. They had to reshape the framework of our intellect itself, to restate and to reform its concepts, to evolve a new approach to Being, a new concept of knowledge, a new concept of science." For example, the new metaphysics of the seventeenth century was to construct a mechanical "world of lifeless matter, incessant local motion, and random collision," to use David Lindberg's expression. The new metaphysics thus ….. "stripped away the sensible qualities so central to Aristotelian natural philosophy, offering them second-class citizenship, as secondary qualities, or even reducing them to the status of sensory illusion"; this was, indeed, a real transformation. For the explanatory capabilities of form and matter, it offered the size, shape, and motion of invisible corpuscles— elevating local motion to a position of pre-eminence among the categories of change an reducing all causality to efficient and material causality. Muzaffar has aptly pointed out that the transformation of the Islamic scientific tradition in Europe was also associated with the European reassessment of Islam and the civilisation it produced. In the process of its re-awakening, European civilisation not only reclaimed Greek and Roman intellectual tradition, it also received a vast reservoir of knowledge from the Islamic tradition. In the first phase it appreciated the Islamic tradition but once it had passed that phase it made a reassessment and saw little commendable in the Islamic tradition. This attitude was to solidify with the appearance of Francis Bacon. "The sciences which we possess come for the most part from the Greeks," he wrote in *Navum Organum*, "for what has been added by Roman, Arabic, or later writers is not much nor of much importance; and whatever it is, it is built on the foundations of Greek discoveries." He goes on to say:

> "For only three revolutions and periods of learning can properly be reckoned; one among the Greeks, the second among the Romans, and the last among us, that is to say, the nations of Western Europe, and to each of these hardly two centuries can be assigned. The intervening ages of the world, in respect of any rich or flourishing growth of science, were unprosperous. For neither the Arabians, nor the Schoolmen need be mentioned; who in the intermediate times rather crushed the sciences with a multitude of treatises, than increased their weight."

This verdict was to be repeated in all fields of learning, until it was engraved on the European conscience. Almost every historian of science and philosopher from this period has left a testimony of disrespect. Interestingly, the invalidation of Islamic learning was not merely a result of the advancements in European science but it was based on a genealogy of learning from the remote antiquity to the present time in which the contribution of the Islamic tradition as a whole was seen as no more than a phase of history in which the Greek learning was "parked" in the Arab lands, where it was corrupted and mutilated. This tradition of censure first appeared among the humanists and was built upon by the historians of philosophy in the seventeenth century.

"Winds of Change" chapter seven of the book, is a telling critique of the changes wrought in the Islam and science discourse during the eighteenth century. It was a century in which the winds of change acquired a ferocity that would leave nothing intact in the whole fabric of Islamic civilization, including its tradition of learning. It would inaugurate an era in which the Islam and science discourse would go through its first great transmutation. But this transmutation would only be a small part of a much greater calamity that this century before the deluge would bring to the entire Muslim world. From an Islamic perspective, this sterile century, so fatefully synchronized with the appearance of certain events on the world history that made it more than a passing lapse, became the beginning of the great collapse that would alter the geopolitical map, uproot established empires and bring about total collapse of the Islamic scientific tradition.

Science religion discourse that took shape during the course of that critical century remained the reigning paradigm until the present time. This paradigm crystallized in the "catching up syndrome" that had already made its appearance all over the Muslim world. Briefly stated, this syndrome is a myopic statement that summarizes the cause of decline of Muslim power by ascribing the loss to falling behind Europe in science and technology. As a corollary, it suggests that as soon as Muslims catch up with the West in science and technology, all will be set aright.

Henceforth, Islam and science discourse was overshadowed by the "catching up syndrome". Those who held centre-stage would bring in the whole weight of the religious tradition, along with its primary source— the Qur'an and the Sunnah— to support their program by emphasizing that

these two sources support acquisition of science. Another aspect of this changed nature of discourse would manifest itself in the rise of mounds of apologetic literature that would attempt to prove that all modern scientific discoveries can, in fact, be traced back to the Qur'an and Sunnah. In the course of time, there would appear institutions sponsored by governments for just this purpose and international conferences would be held to promote a discourse focused on proving modern science through the Qur'an and the divine nature of the Qur'an through modern science. Muzaffar has briefly traced the developments which led to the changes in the discourse during the two and a half centuries between 1700 and 1950 a period that would bring almost all the Muslim world under a colonial yoke and has given us an overview of the "Instruments of Change" which destroyed old institutions, disrupted centuries old social patterns of life, and replaced old languages of discourse with new and alien languages which could be understood by only a small percentage of the population. All of this led to a total collapse of the Islamic scientific tradition and this, in turn, completely transformed the nature of discourse between Islam and science; from being a discourse within the tradition, it became a discourse between Islam and modern science— a tradition that was rooted in a different civilization. "Routes of Transformation" are informative. Nothing is more significant for the understanding of the present phase of the relationship between Islam and science than the period of colonization of the Muslim world. It was during this period that the Muslims as well as their scientific tradition encountered modern western science in the traditional lands of Islam, Dar al-Islam, Moreover, it was an encounter in which Muslims were decidedly at the receiving end; their political strength had already been sapped and they were subjects of a vast ruling apparatus that treated them like second class citizens. Just prior to their colonization, the vacuous remains of their own tradition had seen a large scale effort of reform and revival that had emerged throughout the Muslim world during the eighteenth century.

Until then, the Islam and science discourse had been rooted within the larger Islamic intellectual tradition; now it acquired a new dimension because one of the two entities of the discourse, science, had a matrix situated outside the Islamic tradition. The arrival of this foreign entity, which was premised on its own philosophical and religious foundations, was not like the arrival of the material from the pre-Islamic civilizations into the Islamic scientific tradition because that material had come into the Islamic scientific tradition

because that material had come into a living tradition, through an active process of appropriation. The new science, on the other hand, came to a tradition that was neither actively seeking it, nor was able to appropriate it into its own matrix. As a result, there emerged a completely new phenomenon that produced novel effects previously unknown. This is what Muzaffar has termed "The Colonial Cut" the title of his next chapter. He has analyzed it from various angles and in different regions as the subtitles suggest, "Science in the Service of the Empire", "Institutional Collapse", "Other Regions", "Major Transformations" etc.

This fundamental transformation of the Muslim societies through the replacement of their basic institutions, models, ideology, and in most cases, language of learning was achieved through certain methods that were uniformly applied to all Muslim societies. Following the conquest, assimilation or annexation, the colonized societies were subjected to a reign of terror. Old and established families were uprooted. Leading figures were executed or exiled, ruling classes and people of wealth and fame were made targets of special retribution. The continuity of institutions was disrupted and in many cases, they were destroyed in both the physical and the functional sense. After this period, which varied in length in different societies, new institutions were planted, a new administrative system was designed, and in time a new elite was created this elite group was more than willing to cooperate with the colonial rulers. Products of the new educational system, these people had little or no knowledge of their own history and heritage. The four fundamental changes were (i) the political transformation, (ii) the change in the status of Arabic language, (iii) the replacement of the education system, and (iv) the establishment of Western institutions. These developments pushed the Islamic tradition of learning into the background through violent political, economic and social changes.

The inner mechanisms of reform were not allowed to play their rightful role because of the European intervention. The colonizers often pitted one segment of society against the other. In the course of the nineteenth century, they were able to subjugate almost all parts of the Muslim world. This was a powerful blow from which the Muslim world has still not recovered. The colonization of the Muslim world shattered the inner fabric of the Islamic tradition and brought it face to face with a foreign civilization at a time when it was at its weakest state. Thus, the western civilization managed to carve a

portion of Islamic space as its own territory. This produced a small Muslim elite within these societies that turned its face away from the Islamic tradition and looked toward the Western civilization for intellectual nourishment. But no matter how intensely it attached itself to the Western civilization as long as it kept its faith, it had to return to the sources of spiritual guidance and solace that have always been the focus of the faithful. This created an inner tension that still reverberates in the social, political, and intellectual struggles.

Needless to say, the Islam and science discourse was deeply affected by all of this. It was the beginning of a new kind of discourse between Islamic and science in which science was no more the integral unit of the Islamic tradition but a science of the brave new world, a science that had broken away from all traditions and was an autonomous and powerful entity, independently and defiantly charting its own course, complete with a theology of nature and a worldview competing against other worldviews.

Chapter nine, "The Colonized Discourse", describes the this great chasm between the pre-colonial Islam and science nexus and its post colonial caricature which is not the result of any specific theory of science, but that of a radical recasting of the foundations of science since the seventeenth century.

It was during the colonial era that the Islam and science discourse accumulated a heavy overlay of extraneous issues which had never been part of the traditional discourse. There are three important facets of this new discourse that keep it hostage to the legacy of the colonial era: it is inextricably linked to a feverish demand for the acquisition of Western science— which, in turn, is laden with a whole range of issues in the realms of education and modernity; its apologetics; and a deep layer that is the product of the cultural schizophrenia which characterizes the post-colonial Muslim world. Hundreds of works deal with the issues related to various aspects of Islam in the Modern world. In almost all cases, these works posit the challenge of modernity with a social and cultural context and invariably find the question of Islam and science as an integral part of the discourse on modernity.

Muzaffar has shown that this has led to the emergence of the new Islam and science discourse in a realm that is not its own. These three facets cast such a deep shadow on the new discourse that it is almost impossible to separate it from this burden. This heavy overlay expresses itself in various

attempts to "Islamize" modern science and in the extensive literature that attempts to prove the existence of various modern theories in the Qur'an.

He also notes that unlike the Islam and science nexus that had developed naturally in the eighth century and which grew in various schools of thought and produced a vast corpus of literature, the new discourse is strained, laboured and carries the burden assigned to Islam in the discourse; the legitimization of the modernists agenda. It is also important to note that most of the champions of the new discourse were neither scientists nor 'ulama', but reformers, who wanted Muslims, especially the young Muslim students to acquire Western science.

"The Reformers' Discourse" was formulated in terms of mutual complementarity of the "work of God" (nature) and the "Word of God" (the Qur'an). It was marked by their desire to show that modern science had nothing against Islam and its sacred text and the entice Muslims to acquire modern science. Hidden in this two fold agenda was a desire to bring the Muslim world out of its sorry state; the path was the acquisition of modern science. Almost all reformers translated the Arabic word *'ilm* (knowledge) as "science" (meaning modern science) and framed their discourse on the necessity to acquire knowledge upon which the Qur'an insists and which has been made obligatory for all Muslims by the Prophet. This reduction of the word *'ilm* was conveniently used to produce a new strand of Islam and science discourse which Muzaffar has reviewed in its different manifestations. "In Search of a Modus Vivendi" both Sayyid Ahmad Khan and Jamal al-Din Afghani, though poles apart in their background, training, religious and intellectual perspectives, nevertheless agreed on the need for acquisition of Western science to stop further decline and disintegration of the *dar al-Islam*. They also saw little in Western science that was not just science; they perceived no implicit worldview, philosophy and metaphysical assumptions in science. For them, science ruled the world. "There was, is, and will be no ruler in the world but science".

Muzaffar criticizes Afghani for his erroneous view— which is still held by many Muslims— based on the presumed objectivity of modern physical science. He failed a realize the distinction between the metaphysical underpinning of the sciences to which al-Ghazali's was referring and those of modern science. This rhetoric found new expressions in the next generation of Muslim intellectuals, many of whom were deeply influenced by Afghani,

though each in his own way and not without significant departures from Afghanis courageous stand against colonization.

They did not see science as being culture specific. They believed that modern science can be, rather should be, learned and it can be learned without adopting western values. The underlying assumption was that the secular worldview of the modern West had no inroads into the philosophy, structure, operation and results of the natural sciences. They thought modern science can be imported without any ethical components of Western culture. Because they did not see any incongruity between modern science and Islam, some of them tried to create a semantic bridge by consciously employing the language used in natural sciences in their works on the Qur'an. They also gave birth to a rationalistic discourse that had a strong overlay of modern science.

Last part of the chapter nine is devoted to the analyses of the Case of Turkey in terms of the Islam and science discourse and a critique of Arab scientific journalism that also contributed significantly to the developments in the discourse on Islam and science. His remarks provide a general survey of the various trends of the new discourse. They show that during the colonial era, the discourse on Islam and science became hostage to numerous extraneous considerations. Economics, local and international politics, individual influences, education, state power and many other factors continue to influence the direction of this discourse. Another facet of this colonized discourse emerged in the form of the scientific exegesis of the Qur'an. This genre made its appearance toward the end of the nineteenth century, spread rapidly and then waned in the final decades of the twentieth century, leaving behind residual secondary works. Chapter ten deals with the question of "The Scientific Exegeses".

Muzaffar observes that:

> "The colonized Islam and science discourse that emerged in the nineteenth century made its most daring attempt to securely lodge itself in the Islamic tradition by finding a niche in the very heart of the tradition: the Qur'anic exegesis. Perhaps it was in the very nature of things that instead of seeking roots in the Islamic scientific tradition, the proponents of the new discourse sought legitimacy and sanction for their program in the Qur'an: for they would have found nothing in the

Islamic scientific tradition that could justify their agenda. …. Islamic scientific tradition never sought legitimacy for science by directly invoking the Quranic text in support of its various findings; it operated within the metaphysical and ethical universe of Islam and within a hierarchy of knowledge wherein it had a legitimate place as a birthright. It was linked to all other branches of knowledge that had emerged within the Islamic civilization through an organic relationship that had evolved over time. Most of all, it was linked to the central vertical axis of the Islamic civilization which held all of its diverse manifestations in historical time with a reality that was atemporal and transcendental.

It is because of this secure and natural linkage that we do not find Muslim scientists who practiced science in the framework of inquiry that was anchored in the Qur'anic metaphysics seeking support for their science in the text of Qur'anic, or worse, attempting to "prove" the divine origin of the Qur'an through science; both of these phenomena only emerged in the final decades of the nineteenth century when the Islamic scientific tradition had already withered."

It present state is described as follows:

"By now, the genre seems to have exhausted all verses of the Qur'an that can be shown to contain specific information and knowledge of a scientific nature. This voluminous tafsir literature has also given birth to a large amount of secondary literature, books, articles, television productions, audiovisual and web-based material. Some authors have produced lists of all "scientific verse"; others have classified these verses according to their applicability to various branches of modern science, such as physics, oceanography, geology, cosmology…..

While the trend of writing scientific tafsir seems to have abated, publication of secondary literature the Qur'an and modern science is one the rise. In addition to proving the existence of specific scientific knowledge in the Qur'an, some of these works have also created a sub-branch of this scientific exegesis, *al-I'jaz al-'ilmi*, the scientific miracle, which treats its subject on the same lines as those on which the classical tafsir literature dealt with the theme of the inimitability of the Qur'an."

The general typology of this genre of literature is that it links specific verses of the Qur'an to specific data and theories of science to prove (i) that the Qur'an is really a book of God, revealed to the Prophet of Islam because such specific scientific information was unknown during his life and (ii) that the Qur'an contains all scientific knowledge and it is for science and scientists to discover this knowledge. This approach is encumbered with an emotional, psychological, even political, baggage and has been opposed and challenged by serious scholarship. But its mass popularity remains incontestable. However this trend did not go unnoticed from religious authorities. Muzaffar cites a representative critique by Maulana Ashraf ali Thanvi (d. 1943), who pointed out various errors involved in subjecting the Qur'anic verses to scientific interpretation. "As soon as people hear or see any new finding of science by the Europeans," he wrote, "they try in one way or the other to posit such finding as a connotation of some verse of the *Qur'an*. They reckon this as a great service to Islam, a cause of pride for the *Qur'an*, and a sign of their own ingenuity."

He has successfully shown that this enterprise of *tafsir al 'ilmi* is vulnerable on the ground that science is changeable, and that it is wrong to interpret the Qur'an in the light of a knowledge that is always changing. It is an unsound enterprise because in spite of the voluminous literature so far produced in the name of *tafsir al 'ilmi*, nothing has been shown to be rooted in the centuries of scholarship that has existed in the Islamic tradition. This literature is filled with attempts to show that everything in the contemporary world– from microbes to telegraphs – can be shown to originate in the verses of the Qur'an. Likewise, it reads all major scientific theories– from Big Bang to theories of evolution– in the text of the Noble Qur'an. It also attempts to build a case for the origin of all contemporary sciences in the Qur'an. Thus, it finds the origins of modern astronomy, physics, chemistry, botany, zoology, geology, geography, anthropology, sociology, economics, and psychology in the Qur'an. It is motivated by a wish to demonstrate compatibility (*muwafaqa*) between the Qur'an and modern Western science. Consider the following in this respect: "it is also unsound on the grounds that it is not consistent with the treatment of the rest of the Qur'anic data. For instance, the Qur'an makes a very specific prediction in the opening verses of Chapter 30, The Romans. It states that the Romans, who had been defeated by the Iranians, would turn the tables on Iran within three to nine

years. This predication was fulfilled but no one claimed that the Qur'an contains specific and detailed knowledge of all historical events…. if the Qur'an is said to contain the knowledge of the ancients and those who came in the latter times (*'ilm al-awwalin wa'l-akhirin*), then this should be true of history no less than of science. But if it cannot be claimed that the Qur'an is a repository of all events that would ever happen in historical time, it can also not be claimed to be a repository of all the scientific inventions and discoveries that would ever be made."

The next chapter "The New Nexus" analyzes the problems and pitfalls of the contemporary discourse, identifies obstacles and considers the ways this discourse could be liberated from its present predicament. He observes that all expressions of Reality and all paths to it must remain connected to each other through a central nexus which is the unitive function. This unique aspect of the Islamic perspective on modern science renders many contemporary typologies irrelevant to the discourse. Muzaffar quotes a very insightful remark from Werner Heisenberg in this regard:

> "since it is true that the results of modern physics do touch such fundamental concepts as reality, space and time, the confrontation may lead to entirely new developments which cannot be foreseen. One characteristic feature of this meeting between modern science and the older methods of thinking will be its complete internationality. …. "such remarks should not be misunderstood as an underestimation of the damage that may be done o has been done to old cultural traditions by the impact of technical progress. But since this whole development has for a long time passed far beyond any control by human forces, we have to accept it as one of the most essential features of our time and must try to connect it as much as possible with the human values that have been the aim of the old cultural and religious traditions."

But this is not realized by most of those who are at the helm of the affairs. It is frequently assumed by a majority of reformers and politicians, and even by some scholars, that the Muslim societies can overcome their economic, political and social problems by importing western science and technology without importing any of the philosophical and ethical values that lie behind this science and its products. This facile assumption is based on another assumption: The supposed objectivity and neutrality of modern science.

These are very important issues as the contemporary Islam and science discourse is often construed in terms of these two opposing trends, one calling for an all-out embrace of modern science by imparting upon it a universality by superimposing claims of it being a value-free, objective and enterprise, even an integral constituent of progress and an essential need for survival. The other trend emphasizes the philosophical underlay of modern science and seeks to show the damaging effect to this worldview not only for the Islamic way of life but for the whole human habitat, which is already suffering from a colossal and irreversible environmental devastation. The former attempts to sanctify its agenda through the agency of religion by appealing to the religious duty to acquire knowledge from whichever source it comes, the latter seeks nothing short of a total re-structuring of science in an effort to re-establish its severed ties to Ultimate Reality from which all existent things come and to which they return.

Muzaffar has also examined the responses that Muslim scholars/scientists have offered with regard to the question of liberating the Islam and science discourse and presented us with a clear view of their respective merits and inadequacies. To conclude, we would like to summarize his suggestions on the creating a "New Nexus".

Throughout his book Muzaffar has emphasized that the discourse on Islam and science is not merely an academic exercise for the Muslims. More than a century has passed since the early nineteenth century reformers chose a doomed path for the resurrection of Islamic civilization. A century is a sufficient time to learn. Heisenberg's perceptive remark cited above is not only an axiom; it is an experiential truth for the Muslim world. One cannot resurrect a dead tradition by infusing alien blood into it. By now, it has become exceedingly apparent to a large number of Muslim scholars that the malaise from which the Muslim world is suffering cannot be cured by merely importing Western science and its products; on the contrary, this has only aggravated the situation by creating numerous new problems. So, what is the solution? What are the ways open to more than one billion Muslims who live on this planet to find their rightful place in a world dominated by modern science and its numerous products without losing all sight of their spiritual tradition? How should Islam be related to modern science? What are the new modes through which one can find an expression of this discourse that is

intelligible to even those who are not open to the spiritual truths in which such a discourse has to be rooted by necessity?

Another aspect of the discourse that has become apparent is that modern science cannot be "Islamized" by sprinkling Qur'anic verses over its theories. This realization has fundamental implications for the Islam and science discourse as well as for the Muslim world in its search for a modus vivendi. It is true that at the practical level, it has become impossible for any civilization to remain unaffected by modern science and the force and extent of penetration of modern science into other cultures will continue to increase. But it is also true that in spite of the loss that such an infusion entails, it is still possible for the representatives of traditional civilizations to fortify their civilizations by recourse to the primary sources.

What is needed is not the solution prescribed by the colonized minds of the nineteenth and the early decades of the twentieth century, but a true revival of the Islamic tradition of learning which will then give birth to a process of appropriation of modern science, something akin to what was accomplished during the eighth to eleventh centuries, though the new methods of appropriation, transformation and naturalization will be, by necessity, different from the one which had emerged in the previous case.

These perspectives then need to be articulated vigorously and with integrity, always remaining true to the fundamental truths of the Islamic tradition. With a persistent effort at different levels-ranging from limited exploratory interactions between scholars to public forums-the new nexus will become central in the discourse and the profane efforts to prove the revealed text by modern science or to find one to one correspondence between the two will disappear.

Likewise, the revival of the severed ties with the Islamic tradition is a *sine qua non* for understanding the relationship between Islam and modern science. Without these ties re-established at the most fundamental level, nothing can be achieved. It is this re-established nexus that will help to make the discourse a vibrant and living entity, capable of sorting and processing material as well as having enough force to destroy the colonial legacy by liberating hearts and minds.

Although it is still too early to articulate the exact paths through which modern science will be appropriated and naturalized within a renewed Islamic understanding, it is important to point out two major aspects. First, this process will take place within a more general process of revival of Islamic tradition of learning. This is only possible through a large-scale effort to re-educate Muslims in the various sciences that deal with the language of revelation. Without this grounding, nothing can be accomplished that can have any significant impact on the general process of revival.

The second aspect is related to the Qur'an and science. The language of the Qur'an does not allow a semantic transference to the language of modern science. Thus, it is futile, rather absurd, to find telephones, microbes and the Big Bang in the text of the Qur'an. What is relevant, however, is the metaphysical teachings of the revealed Book which remain, by their very nature, ahistorical, timeless and forever true. It is this metaphysical framework that needs to be applied to modern science, and indeed, to all knowledge, whatever its source. This is neither a simple process, nor should this be the case.

This is also not a task that everyone can undertake. It requires institutions where a small number of scholars can be trained who are rooted in the spiritual universe of the tradition but who are also intellectually equipped to understand specific branches of modern science. Fortunately, there is already a large number of Muslim scientists now living in the West and working in some of the most advanced laboratories of the world; they are well suited to undertake this task, provided they receive formal training in Islamic sciences with the understanding that their education of modern Western science is both an asset and an impediment. It is an impediment because their formal training and personal experiences of a life lived in a non-traditional environment have created numerous cognitive patterns, peculiar habits of mind and a certain clouding of the intellect that act as black holes. But, we affirm that a mirror remains a mirror, no matter how much dust may have settled on it, for a well-scrubbed mirror holds back nothing. Likewise, a new generation of 'ulama' with enough understanding of modern science is emerging on the scene; the future of the discourse will be determined by these two groups.

In short, *Islam and Science* is a stimulating and rewarding study. Formulating new questions, constantly offering fresh perspectives, correcting erroneous notions that have been accepted unquestioningly and providing needed correctives to much muddled thinking on the basic issues surrounding the Islam and science discourse, it is a very welcome addition to the growing body of authentic literature on the subject.