TIME–AS UNDERSTOOD IN EAST AND WEST

Ghulam Sabir

ABSTRACT

The importance of time has always been there in the mind of Man from the very beginning. Even Greeks and after them Muslim philosophers belonging to pre-scientific period tried to understand the reality of time. The Ikhwan rejected the Aristotelian notion of time as being nothing but a measure of movement. They considered that time is related to the motion of heavenly bodies in the physical world. But at the same time they maintained that from metaphysical point of view time is a pure form, an abstract notion, simple and intelligible, elaborated in the soul by the faculties of the spirit. To them it is an abstract simple and intelligible idea, a form abstracted from matter and existing only in consciousness. Kant concludes, "I can also say from the principle of inner sense, that all appearances whatsoever, that is, all objects of the senses, are in time, and necessarily stand in time-relation." Novikov remarks that Time is a uniform 'river' without beginning or end, without 'source' or 'sink', and all events are 'carried' by the river's flow. Time has no other property except the only property which is 'of always being of the same duration. To him the 'absolute time' is identical throughout the universe.' Henry Bergson writes that Plato expresses in his magnificent language when he says that God, unable to make the world eternal, gave it Time, "a moving image of eternity." Bergson offers a practical example of the real Time: "If I want to mix glass of sugar and water, I must, willy-nilly, wait until the sugar melts. Iqbal relates the issue of time with human self. He says that 'on the analogy of our inner experience, then, the conscious existence means life in time. A keener insight into the nature of conscious experience, however reveals that the self in its inner life moves from centre outwards. It has, so to speak, two sides which may be described appreciative and efficient.' Elaborating both the sides of human self Iqbal tells us that the efficient self is the subject of 'associationist psychology' and this is the practical self of our daily life 'in its dealing with external order of things which determine our passing states of consciousness and stamp on these states their own spatial feature of mutual isolation.

> What then is time? If no one asks me I know what it is. If I wish to explain it to him who asks me, I do not know. (St. Augustine)
> The realm of time is infinity; it has no past, no present and no future. (Immanuel Kant)
> A deeper analysis into our conscious experience shows that beneath the appearance of serial duration lies is true duration. (Iqbal)

Iqbal as a contemporary of Einstein, wrote, 'What is the character and general structure of the Universe in which we live? Is there a permanent element in the constitution of the Universe? How are we related to it? What place do we occupy in it, and what is the kind of conduct that befits the place we occupy? These questions are common to religion, philosophy, and highest poetry.' The views of Iqbal about the existence of Time, which is a delicate and most important topic, will be taken up later. Let us first have a short glance on the ideas of a few of other great thinkers in this regard.

The importance of time has always been there in the mind of Man from the very beginning. Even Greeks and after them Muslim philosophers belonging to pre-scientific period tried to understand the reality of time. The Ikhwan rejected the Aristotelian notion of time as being nothing but a measure of movement. They considered that time is related to the motion of heavenly bodies in the physical world. But at the same time they maintained that from metaphysical point of view time is a pure form, an abstract notion, simple and intelligible, elaborated in the soul by the faculties of the spirit. To them it is an abstract simple and intelligible idea, a form abstracted from matter and existing only in consciousness.

Newton regarded Time as absolute. Igore D. Novikov says that 'in Newton physics time is a flow of duration which involves all processes without exception. It is the 'river of time', whose flow is not influenced by anything.' Novikov quotes Newton as saying:

> Absolute, true and mathematical time, of itself, and from its own nature, flows equably without regard to any thing external, and by name is called duration.
> (Newton *Mathematical Principles of Natural Philosophy).*[1]

Immanuel Kant believes that the space and time are both forms of sensible intuition. Let us briefly quote here the metaphysical exposition of his concept of Time. He maintains:

1. Time is not an empirical concept derived by any experience.
2. Time is a necessary representation that underlies all intuitions.
3. Time has only one dimension; different are not simultaneous but successive.
4. Time is not discursive, or what is called a general concept, but a pure sensible intuition. Different times are but part of the same and one time; and the representation which can be given only through a single object is intuition.
5. The infinitude of time signifies nothing more than every determinate magnitude of time is possible only through limitation of one single time that underlies it.

Kant concludes, "I can also say from the principle of inner sense, that all appearances whatsoever, that is, all objects of the senses, are in time, and necessarily stand in time-relation."[2]

Novikov remarks that Time is a uniform 'river' without beginning or end, without 'source' or 'sink', and all events are 'carried' by the river's flow. Time has no other property except the only property which is 'of always being of the same duration. To him the 'absolute time' is identical throughout the universe.'[3]

Henry Bergson writes that Plato expresses in his magnificent language when he says that God, unable to make the world eternal, gave it Time, "a moving image of eternity." Bergson offers a practical example of the real Time: "If I want to mix glass of sugar and water, I must, willy-nilly, wait until the sugar melts. This little fact is big with meaning. For here the time I have to wait is not that mathematical time which would apply equally well to the entire history of the material world, even if that history were spread out instantaneously in space. It coincides with my impatience, that is to say, with a certain portion of my own duration, which I cannot protract or contract as I like." He continues, "It is no longer something *thought,* it is something *lived.* It is no longer a relation, it is an absolute." According to him the duration is immanent to the whole of the universe and he says that 'the universe *endures*. The more we study the nature of Time, the more we shall comprehend that duration means invention, the creations of forms, the continual elaboration of the absolutely new.'[4]

John Wheeler, a patriarch of modern theoretical physics, as described by Igor D. Novikov, visited him on the 5th. June 1992. They had very useful exchange of views particularly on problems of black hole physics. Before Wheeler left, he asked him: 'John, you pioneered several revolutionary developments in physics and in addition you are famous for your pithy, terse definitions of the most profound concepts of modern physics. Could you try to formulate what time is? I need for a physics popularising book, to be translated into English.' He says that 'John took a very long time to mull it over; I suspected that he had fallen asleep (we had just finished a very good dinner). Actually he was deep in thought.' When he opened his eyes he said very seriously that he would think about it and write to him. After a little more than a month Igor received a letter from him together with a copy of his book *Frontiers of Times* with his hand-written dedication: 'To Igor – May you be timeless! John. 25.IX.92.' In the letter he wrote: 'You asked for a phrase. There are graffiti on the wall of the men's room in Austin, Texas, and among them is this, "Time is nature's way to keep everything from happening all at once".[5]

John Butler Burke says that we can avoid much futile discussion by recognising the difference between various concepts of time. He defines them as: (1) Absolute time, implying a definite *Now* common throughout the universe; (2) Physical time, which is relative but partly subjective; (3) Psychological time, purely subjective. Elaborating further he writes:

(1) Absolute time, though implying a definite *Now* common throughout the Universe, can no more be determined physically than absolute space. The reality of either cannot be denied and need not be asserted, for in physical measurement they do not enter into experimental considerations. From the metaphysical standpoint the idea of absolute time is of importance. It is not necessarily inconsistent with idealism, for even if time be subjective it may be common to all minds, and, like truth itself, be a universal reality.

(2) Physical time, however, depends upon simul- taneity and the measurement of equal intervals, both of which are affected by the motion of bodies relatively to each other. Time as a measurable quantity cannot be reckoned without space. The two must be considered together as in the 'space-time continuum' of the physicist. But in so doing it still remains 'subjective'. (This corresponds to Bergson's 'spatialised' time).

(3) Psychological time is purely subjective. This psychological time is what Locke called duration. It may be slowed down in moments of distraction, so that an hour may appear as a few minutes, or to the Budhist as eternity; while the evidence of persons saved from drowning and similar cases shows that a few moments may appear as a lifetime.[6]

Hugo Ross, an astrophysicist, says that "by definition time is that dimension in which cause and effect phenomena take place. … If time's beginning is concurrent with the beginning of the universe, as the space-time theorem says, then the cause of the universe must be some entity operating in a time dimension completely independent of and pre-existent to the time dimension of the cosmos. This conclusion is powerfully important to our understanding of who God is and who or what God isn't. It tells us that the creator is transcendent, operating beyond the dimensional limits of the universe. It tells us that God is not the universe itself, nor is God contained within the universe." Rudolf Steiner (1861-1925) said that "cultivation of man's evolving spiritual perception was the most important task facing humanity."[7]

Henry Bergson, the French philosopher presents the idea somewhat similar to that of Hugo Ross in a different and more explicit manner. In his book *Creative Evolution* he says "that intuition and intellect represent two opposite directions of the work of consciousness: intuition goes in the very direction of life, intellect goes in the inverse direction, and this finds itself naturally in accordance with the movement of matter. A complete and perfect humanity would be that in which these two forms of conscious activity should attain their full development."

Iqbal places real Time much higher than that described by other philosophers. These philosophers have admitted the existence of real time and everyone in his own way has also provided solid arguments supported by valid reasons of their claim. But the way of Iqbal is quite different in the expression through his powerful poetry. Iqbal is very clear in the difference between temporal time real Time. He expressed his view of temporal time in the following verses:

Khirad huye hay zamaan-o makaan ki zunnari;
Na hai zamaan na makaan La Ilaha Illallah.. [8]
(Human mind is worshipping time and space as idols;
In the Divine Order (such) time and space are non-existent.)

The above cited verses are actually a sharp reaction of Iqbal to Einstein's declaration in which he says that there is no absolute or

real time but there exists only time which is part of space and has one dimension out of four of the space-time. Einstein's second remark was that space and time should be no more a subject for the poets and philosopher. The findings of Einstein created anxiety and disturbed the minds of philosophers such as Iqbal. We find that Iqbal is very much mindful to the existence of serial time and physical space. He admits that these are also real in the physical universe. He says that serial time is 'the time of which we predicate long and short' and also that the serial Time is divided into past, present and future. It is useful in our daily life in dealing with the external order of things. Iqbal agrees that it is hardly distinguishable from space, but adds that 'beneath the appearance of serial duration there is true duration.' And to him true duration is change without succession. This is what Iqbal sometimes calls real Time or pure time. We quote below extracts from Iqbal's extensive deliberation on the subject:

> Pure Time, then, as revealed by a deeper analysis of our conscious experience, is not a string of separate, reversible instants: it is an organic whole in which the past is not left behind, but is moving along with, and operating in, the present. And the future is given to it not as lying before, yet to be traversed; it is given only in the sense that it is present in its nature as an open possibility. It is Time regarded as an organic whole that the Qur'an describes as *Taqdir* or the destiny – a word which has been so much misunderstood both in and outside the world of Islam. Destiny is time regarded as prior to the disclosure of its possibilities. It is time freed from causal sequence. … In one word, it is Time as felt and not as thought and calculated.[9]

Einstein's scientific contribution to mankind cannot be ignored, but at the same time his denial of absolute or real time is a heavy blow to the believers as it caused the human brain to find refuge in the seen world and tried to liberate itself from the unseen, that includes Reality and things closely related to the Real (God). Iqbal, a philosopher of the East and Bergson a philosopher of the West were contemporaries of Einstein. Both of them, as so many others, since then, have refused to accept the idea of Einstein that there is nothing like absolute time. There is no doubt in the greatness of this person being one of the greatest scientists the world has known. He brought about a revolution in the world of science. His theory of relativity opened the doors of new fields in cosmology. It was Einstein who paved the way of man to be able to travel far away regions into the skies and explore nature's hidden secrets; it was Einstein who proved theoretically that energy and mass were equivalent, which meant that energy could be converted into mass and mass be converted into

energy; it was Einstein who managed to change the way of investigation for cosmologists in respect of movement of bodies in cosmos and measuring the time and distances to and in between these inhabitants of skies. But at the same time he failed to grasp the existence of real or absolute time. His total denial to absolute time demonstrated his lack of faith in the existence of God. A little before his death he had told that his body should not be buried but it should be burnt and the ashes should let be flown in the air. As a result of his aggressive attitude towards organised religion some people believe that Einstein was atheist. But this is an extreme view of the facts.

In fact religion also is a feeling or an instinct, which is built in the nature of Man, and Einstein was not an exception. This feeling when develops becomes faith and then turned into belief in the existence of God. All inventions of science have been the result of some sort of revelation from 'unknown' as indicated by most of the top scientists of the world. Their experiences are on record. As for Einstein he himself wrote in reply to a question of J. Murphy:

> 'Speaking of the spirit that informs modern scientific investigations, I am of the opinion that all the finer speculations in the realm of science spring from a deep religious feeling and that without such feeling they would not be fruitful. I also believe that, this kind of religiousness, which makes itself felt today in scientific investigations, is the only creative religious activity of our time.'[10]

From the above cited caption of Einstein we find that Einstein though believed in religion, but his concept of religion is evident from his last sentence, in which he has limited the scope of religion to scientific investigations, stressing that this 'is the only creative religious activity of our time.' In 1936 Einstein clarified his concept of religion in a letter written in reply to the question of Phyllis Wright, a student in the Sunday school of the Riverside Church in New York. Phyllis asked whether scientists pray, and if so, what they pray for? Einstein wrote to him a detailed reply, from which we quote the last few lines which say:

> …Everyone who is seriously engaged in the pursuit of science becomes convinced that the laws of nature manifest the existence of a spirit vastly superior to that of men, and one in the face of which we with our modest powers must feel humble. The pursuit of science leads therefore to a religious feeling of a special kind, which differs essentially from religiosity of more naive people.
> With friendly greetings, yours Albert Einstein.'[11]

As a matter of fact Einstein's mind remained completely occupied in exploring nature's laws. He was mostly involved in the affairs of the world of matter and could never use his power of contemplation to look behind the visible screen of the seen world which is displaying wordily drama all of which is relative to the finite time and is itself finite. Whatever exists behind the screen is real and infinite, to which unfortunately some of the great minds like Einstein did not have visionary access. The knowledge of the unseen is only possible by looking at the depths of our own soul, and this is the mystical way that some of the great scientists and philosophers of the world have very successfully adopted. This is another source of knowledge, besides reason and sense perception, which is called 'inner perception' that reveals 'non-temporal and non-spatial planes of being' Here I would like to quote Bergson again, who says that 'we must strive to see in order to see, and no longer to see in order to act. Then the **Absolute** is revealed very near to us, and in a certain measure, in us. It is of psychological and not of mathematical nor logical essence. It lives with us.'[12]

Bertrand Russell, as quoted by Iqbal in his *Reconstruction of Religious thought in Islam*, said that 'the theory of relativity by merging time into space has damaged the traditional notion of substance more than all the arguments of the philosophers. … The old solidity is gone, and with it the characteristics that to the materialist made matter seem more than fleeting thoughts'. Iqbal says that Einstein's Relativity presents one great difficulty, i.e. the unreality of time. 'A theory which takes Time to be a kind of fourth dimension of space must, it seems, regard the future as something already given, as indubitably fixed as the past. Time as a free creative movement has no meaning for the theory. It does not pass. Events do not happen, we simply meet them. It must not, however, be forgotten that the theory neglects certain characteristics of time as experienced by us; and it is not possible to say that the nature of time is exhausted by the characteristics which the theory does note in the interests of a systematic account of those aspects of Nature which can be mathematically treated. Nor it is possible for us laymen to understand what the real nature of Einstein's time is. It is obvious that Einstein's time is not Bergson's pure duration. Nor can we regard it as serial time. Serial time is the essence of causality as defined by Kant. The cause and effect are mutually so related that the former is chronologically prior to the later, so that if the former is not, the latter cannot be. If mathematical time is serial time, then on the basis of the theory it is possible, by a careful choice of the velocities of the observer and the system in which a given set of

events is happening, to make the effect precede its cause. It seems to me that time regarded as a fourth dimension of space-time really ceases to be time. A modern Russian writer, Ouspensky, in his book called *Tertium Organum,* conceives the fourth dimension to be movement of a three-dimensional figure in a direction not contained in itself.[13]

To Bergson Reality is a continuous flow, a perpetual Becoming and external objects which appear to us as so many 'immobilities' are nothing more than the lines of interest which our intellect traces out across this flow. They are, so to speak, constellations which determine the direction of our movement and thus assist us in steering across the over- flowing ocean of life. Movement, then, is original and what appears as 'fixity' or rest in the shape of external things is only movement retarded. This is as seen by a mathematically inclined intellect, which sees surface of things only, it has no vision of real change from which they are derived. The method of physical science, working with spatial categories does not and cannot carry us very far in our knowledge of Reality. Therefore, to catch a glimpse of ultimate nature of Reality a new method is necessary and that method is intuition, which according to Bergson is only a profound kind of thought, revealing to us the nature of life. This method discloses to us that the element of time, which physical science ignores in its study of external things, constitutes the very essence of living things; and this is another name for life. Thus the ultimate reality is time the stuff out of which all things are made – a Becoming, movement, life and time are only synonymous expressions. But this time which Bergson calls 'Pure Duration' must be carefully distinguished from the false notion which our mathematical intellect forms of it. Our intellect regards time as an infinite straight line portion of which we have traversed and a portion has yet to be traversed. This is only rendering time to a space of one dimension with moments as its constitutive points. This spatialised time is false and unreal time. Real time or 'Pure Duration' does not admit of any statically conceived today's and yesterday's. It is as actual ever present "now" which does not leave the past behind it, but carries it along in its bosom and creates the future out of itself. Thus Reality, as conceived by Bergson is a continuous forward creative movement with opposites implicit in its nature and becoming more and more explicit as it evolves itself.[14]

Bergson defining real time says: 'Ones we place ourselves in the position of a disinterested observer and dismiss the natural habits of mind, we see easily that the movement and time are the reality we

deal with directly, in the simplicity of unmediated contact. … We can go beyond ourselves and extend our time in both directions: the way down leads towards our homogeneity or pure repetitiveness, that is, materially; on the way up we come closer and closer to living eternity.'[15]

All the way from Aristotle down to Newton's time most philosophers and a large number of scientists conceived time as absolute and real. They had well differentiated between the real time and unreal or clock time. But during the nineteenth and twentieth centuries, with all the achievements of man due to development of science, a part of the intellectuals became materialistic. To this Einstein's general theory of relativity worked like a hammer on hot iron. He declared time and space as one to which he named "space-time" having four dimensions consisting of three dimensions of space and one dimension of time. Obviously time related with the universe can only be finite and therefore unreal, as this began with the emergence of the universe and is going to end up at the future singularity, the ultimate destination of the universe as regarded by scientists.

Adolf Grunbaum, in his *Philosophical Problems of Space and Time* has quoted St. Augustine, from *Confession, Book Eleven,* reprinted as translated and edited by Albert C. Outler, in Volume VII of the Library of Christian Classics, Westminster Press and SCM Press, Philadelphia and London, 1955. We reproduce its as following:

> 'There was no time, therefore, when thou hadst not made anything, because thou hadst made time itself. And there are no times that are co-eternal with thee because thou dost abide for ever; But if times should abide, they would not be times.
> For what is time? Who can easily and briefly explain it? Who can even comprehend it in thought or put the answer into words? Yet is it not true that in conversation we refer to nothing more familiarly or knowingly than time? And surely we understand it when we speak of it; we understand it also when we hear another speak of it. What then is time? If no one asks me I know what it is. If I wish to explain it to him who asks me, I do not know. Yet I say with confidence that I know that if nothing passed away, there would be no past time; and if nothing were still coming, there would be no future time; and if there were nothing at all, there would be no present time.
> But, then, how is it that there are the two times, past and future, when even the past is now no longer and the future is now not yet? But if the present were always present and did not pass into past time, it obviously would not be time but eternity.'

Like all other concepts Iqbal has made time and space as one of the major themes of his poetry. It is his poetry that goes directly to the heart of matter and emphasise the fact that reality is there. In the following verses he is saying that the problem of not understanding the nature of true time originates from our ignorance of the very basis of everlasting life. We quote below four verses from his famous Persian book Asrar-i-Khudi (Secrets of the Self):

Tu as asl-i zaman aagah naee,
Az Hayat-i Javidan aagah naee.
Ta kuja dar ros-o shab bashi aseer?
Ramz-i waqt az li-ma-Allah yaad gir. [16]
(Knowing not the origin of Time,
Thou are ignorant of the everlasting life,
How long will you be a thrall of night and day?
Learn the mystery of Time from the words "I have a time with God.")[17]

We have been studying the two kinds of time, the clock time or mathematical time and an absolute time or real time as viewed by different philosophers and scientists. Stephen W. Hawking has also commented on the issue of time. To him there is nothing like an absolute time, but at the same time he says that there are three sorts of time, to which he terms as 1) Thermodynamic arrow of time, 2) Cosmological arrow of time, and 3) psychological arrow of time. His idea of the three arrows of time follows a lengthy scientific discussion to which he has devoted a full chapter in his book *A Brief History of Time*. Out of the three arrows of time Hawking's Psychological arrow of time comes quite near to the absolute time, as he comments: "Our subjective sense of the direction of time, the psychological arrow of time, is therefore determined within our brain by the thermodynamic arrow of time."[18] Hawking has also talked on the idea of imaginary time but purely in scientific language. Inviting our reader's imagination we just quote him on his "imaginary" time, wherein he says: 'When one tried to unify gravity with quantum mechanics, one had to introduce the idea of "imaginary" time. Imaginary time is indistinguishable from directions of space.' It means that Einstein's one dimension of time out of four in Space-time is different from Hawking's imaginary time.

B.K. Ridley also refuses the existence of absolute time and believes only in Earthly time or clock time. But he is also compelled to think otherwise by concluding his argument in these words: "But then again perhaps time is imaginary, as religious mystics often claim. The idea of imaginary time might solve the problem of the beginning of time and the end of time. At any rate, there is time of thinking which believes it has a chance of doing so."[19]

From the foregoing study we may assume that whosoever tries to deny real time must, by dint of their own arguments and reflections on the infinite, embrace this counterpoint argument and accept that there is an absolute time which is reflected in the metaphysical and the divine. Iqbal, however, is very clear in his concept of the difference between real or absolute time and false or unreal time. He calls clock time as unreal and the absolute time as real time, since the former belongs to the objective world and the later relates to subjective realm. Iqbal takes life as well as time quite seriously. Iqbal had a meeting with Bergson at France in which the problem of time also came under discussion besides other philosophical issues. Iqbal expressed his concern on the declaration of Einstein that there did not exist any absolute time. Bergson was in full agreement with the point of view of Iqbal on the existence of absolute time, which he called as 'pure duration'. Iqbal and Bergson had no two views on this issue, since both of them had faith in the existence of a personal God and they had a clear perception of real or absolute time.

Iqbal relates the issue of time with human self. He says that 'on the analogy of our inner experience, then, the conscious existence means life in time. A keener insight into the nature of conscious experience, however reveals that the self in its inner life moves from centre outwards. It has, so to speak, two sides which may be described appreciative and efficient.' Elaborating both the sides of human self Iqbal tells us that the efficient self is the subject of 'associationist psychology' and this is the practical self of our daily life 'in its dealing with external order of things which determine our passing states of consciousness and stamp on these states their own spatial feature of mutual isolation. The self here lives outside itself as it were, and, while retaining its unity as a totality, discloses itself as nothing more than a series of specific and consequently numerable states.' He concludes on the life and time of efficient self saying that 'the time in which the efficient self lives is, therefore, the time of which we predicate long and short. It is hardly distinguishable from space.' This is the time, which according to Einstein is the fourth dimension of space-time continuum. We can conceive it, says Iqbal, 'only as a straight line composed of spatial points which are external to one another like so many stages in a journey.' He, therefore, rules that such a time is not true time, because 'Existence in spatialised time is spurious existence.' And, then, he explains his viewpoint in this way: 'A deeper analysis of conscious experience reveals to us what I have called the appreciative side of the self. With our absorption in the external order of things, necessitated by our present situation, it is extremely difficult to catch a glimpse of the

appreciative self.' The reason, according to him, is that 'in our constant pursuit after external things we weave a kind of veil round the appreciative self which thus becomes completely alien to us.' He concludes: 'It is only in the moments of profound meditation, when the efficient self is in abeyance, that we sink into our deeper self and reach the inner centre of experience. In the life-process of this deeper ego the states of consciousness melt into each other.' The unity of the appreciative self with efficient self is, as Iqbal puts it, 'like the unity of the germ in which the experiences of its individual ancestors exist, not as a plurality, but as a unity in which every experience permeates the whole.' At the end Iqbal says that 'it appears that the time of appreciative self is a single 'now' which the efficient self, in its traffic with the world of space, pulverises into a series of 'nows' like pearl beads in a thread. Here is, then, pure duration unadulterated by space.'[20] Iqbal sings:

Kisi ney dosh dekha hai na farda;
Faqat Imroz hai tera zamana.[21]
(No one has seen yesterday or tomorrow,
It is only today which is your duration.)

Mustansir Mir, an imminent Iqbal scholar, now residing in Ohio, USA, says that the distinction between serial time and pure time also helps us to understand the important concept of *Taqdir* or destiny; which are commonly misunderstood as fixed and determinate future (called *Kismet*). To Iqbal 'destiny is time regarded as prior to the disclosure of its possibility. It is time freed from the net of causal sequence – the diagrammatic character which the logical understanding imposes upon it.' Iqbal adds: 'In one word, it is time as felt and not as thought and calculated.' Therefore, says Iqbal, 'the appreciative self 'is more or less corrective of the efficient self, inasmuch as it synthesises the 'heres' and 'nows' – the small changes of space and time, indispensable to the efficient self – into the coherent wholeness of personality. Pure time, then, as revealed by a deeper analysis of our conscious experience, is not a string of a separate, reversible instant; it is an organic whole in which the past is not left behind, but is moving along with and operating in, the present. And the future is given to it not as lying before, yet to be traversed; it is given only in the sense that it is present in its nature as an open possibility. It is time regarded as an organic whole.'[22]

Seyyed Hossein Nasr in 'the Gifford Lectures' said that there are two modes of time, one objective and the other subjective. 'Objective time is cyclic by nature, one cycle moving within another with a quaternary structure which manifests itself on various levels

ranging from the four parts of the day (morning, midday, evening and night). … As for subjective time it is always related to the consciousness of past, present and future which flow into one another, each possessing its own positive as well negative aspects. The past is a reflection of the origin, the memory of paradise lost and the reminder of faithfulness to tradition and what has been already given by God. But it is also related to imperfection to that man has left behind in his spiritual journey, the world that man leaves for the sake of God. The future is related to the ideal which is to be attained, the paradise that is to be gained. But it is also a sign of loss of childhood and innocence and elongation and separation from the Origin which means also tradition. As for the present which is man's most precious gift it is the point where time and eternity meet; it symbolises hope and joy. It is the moment of faith and the door toward non-temporal. Contemplation is entry into the eternal present which is now.' He concludes that both objective and subjective time have a relative reality. … 'As far as spiritual experience is concerned, the present moment as the gateway to the eternal is so significant that practically all the traditions of the world speak with nearly the same tongue concerning the present moment, the instant (*nu alzemale),*the present now (*gegenwurtig nu),* and the eternal now (*ewigen nu)* of Meister Eckhart in which God makes the world, the *waqt or aan* of Sufism whose "son" the Sufi considered himself to be (according to the well-known saying "the Sufi is the son of the moment – *al Sufi Ibn al Waqt.*[23]

The Russian-German mathematician Hermann Minkowski, who happened to be a teacher of Einstein, said in 1908 during an interview in Cologne: "Henceforth space by itself and time by itself are doomed to fade away into mere shadows, and only a kind of union of the two will preserve an independent identity."[24] These remarks of Minkowski bear great importance and need to be taken seriously.

As stated above Minskowski said that 'henceforth space by itself and time by itself are doomed to fade away into mere shadows'. Iqbal also said the same but in different words. To him Time and Space are non-existent in the Divine Order even as relationship, modalities or dimensions of Being. Divine Order is timeless and spaceless or non-spatio-temporal. Time and Space are the categories that do not pertain to God. The verse of Iqbal *"Na hai zaman na mkan la-Ilaha Illallah"* means that in the Divine Order time (as part of space) is non-existent. Real time to Iqbal is more fundamental than

space; it is related to space as soul is to a body; it is the matrix of the heavens and the Earth

We have studied the physical as well as metaphysical aspects of Space and Time, which is now called space-time by our scientists. Time has lost its separate existence in the minds of our scientists; but the fact remains that the importance of 'real time' is far greater than the importance of the time attached to space-time. For scientists time has no existence separate from Space; it is just a fourth dimension of Space. In other words the name of a fourth dimension of Space is 'Time'. Pure or true time being the real, as also called pure duration, has always remained beyond the scope of study by most of the modern scientists. What barred them from stepping in this arduous field, we feel, is the metaphysical aspect of the issue to which they are reluctant to recognise. Life, as Iqbal says, 'with its intense feeling of spontaneity constitutes a centre of indetermination, and thus falls outside the domain of necessity. Hence science cannot comprehend life. The biologist who seeks a mechanical explanation of life is let to do so because he confines his study to the lower forms of life whose behaviour discloses resemblances to mechanical action. If he studies life as manifested in himself, i.e. his own mind freely choosing, rejecting, reflecting, surveying the past and the present, and dynamically imagining the future, he is sure to be convinced of the inadequacy of his mechanical concepts.'[25]

Professor Nicholson was a teacher of Iqbal and he was the first person who introduced Iqbal in the West as a unique poet-philosopher of that time. He translated Iqbal's *Asrar-i Khudi* from Persian to English during Iqbal's life time. With the following additional verses of this great poet-philosopher on the issue of time we end with the translation by his learned teacher R.A. Nicholson.

Eeno-Aan paidast az raftar-i waqt,
Zindagi sirrest az asrar-i waq.
Asl-i waqt az gardish-i khurshid neest,
Waqt Javed-ast-o khur javed neest.
Waqt ra misl-i makaan gustarda-i,
Imtiaz-i dosh-o farda karda-i.
Aye cho bu ram karda az bustan-i khesh,
Saakhti az dast-i khud zindan-i khesh.
Waqt-i ma ku awwal-o akhir nadeed,
Az khyaban-i zamir-i ma dameed.
(Phenomena arise from the march of Time,
Life is one of Time's mysteries.
The cause of Time is not the revolution of the Sun,
Time is everlasting but the Sun does not last for ever

Thou hast extended Time, like Space,
And distinguished Yesterday from Tomorrow.
Thou hast fled like a scent, from thine own garden,
Thou hast made thy prison with thine own hand.
Our Time which has neither beginning nor end,
Blossoms from the flower-bed of our mind.)[26]

Notes and References

1 *The River of Time* by Igor D. Novikov, published by the Press Syndicate of the University of Cambridge, U.K. in 1998 (Reprinted 2004), p. 29-30

2 *Prolegomena to Any Future Metaphysics* by Immanuel Kant, English translation of Paul Carus revised by James W. Ellington, published by Hackett Publishing Company, printed in the United States of America, 1977, p. 77

3 *The River of Time* by Igor D. Novikov, published by the Press Syndicate of the University of Cambridge, U.K. in 1998 (Reprinted 2004), p. 31

4 *Creative Evolution* by Henri Bergson, translated by Arthur Mitchell, published by Macmillan and Co, Ltd., London, 1922, p. 10-11

5 *The River of Time* by Igor D. Novikov, published by the Press Syndicate of the University of Cambridge, U.K. in 1998 (Reprinted 2004), p. 198-199

6 *The Emergence of Life* by John Butler Burkey, published by Oxford University Press London (1931), p. 292-3

7 *A Dictionary of Philosophy*, second revised edition published in 1983 by Macmillan Press. This edition published by Pan Books Ltd., London, in 1984, p. 15

8 *Zarb-i Kalim*, (Kulliyat-i Iqbal, p.527, 7th. edition, published by Iqbal Academy Pakistan – 2006.

9 *The Reconstruction of Religious Thought in Islam* by Dr. Muhammad Iqbal, first published in 1934 by Oxford University Press, reprinted and published by Iqbal Academy Pakistan in 1989, p. 39-40

10 *Einstein and Religion* by Max Jammer, published by Princeton University Press, New Jersey (1999), p. 68-69

11 Ibid., p. 93

12 *Creative Evolution* by Henri Bergson, translated by Arthur Mitchell, published by Macmillan and Co, Ltd., London, 1922, p. 315

13 *The Reconstruction of Religious Thought in Islam* by Dr. Muhammad Iqbal, first published in 1934 by Oxford University Press, reprinted and published by Iqbal Academy Pakistan in 1989, p-31-32

14 This is extract from a paragraph of unfinished article handwritten by Iqbal and saved in Archives of Iqbal Academy Pakistan.

15 *BERGSON* by Leszek Kolakowski, published by Oxford University Press (1985), p. 27

16 *Asrar-o Ramooz,* translated by Mian Abdul Rashid published by Sheih Ghulam Ali and Sons, Lahore, 1991, p. 170

17 *Secrets of Self*, Translation of Iqbal's Asrar-i Khudi by Professor R.A. Nicholson, First published by Macmillan, London, repinted by Sh..Muhammad Ashraf, Lahore, 1983, p. 136-7 – The translator, R.A. Nicholson, writes in the footnote that the prophet Muhammad said, "I have a time with God of each sort that neither angel nor prophet is my peer." Meaning (if we interpret his words according to the sense of this passage) that he felt himself to be timeless.

[18] *A Brief History of Time* by Stephen W. Hawking, published by Transworld Publishers, London WS SSA (Reprinted 1992), p. 147

[19] *Time, Space and Things* by B.K. Ridley, Published by the Press Syndicate of the University of Cambridge, U.K. in 1994, p. 68

[20] *The Reconstruction of Religious Thought in Islam* by Dr. Muhammad Iqbal, first published in 1934 by Oxford University Press, reprinted and published by Iqbal Academy Pakistan in 1989, p. 38-39

[21] *Kuliyat-i Iqbal* Urdu, published by Iqbal Academy, Lahore , eighth edition 2007.LON Laws of Nature by Rom Harre, published by Gerald Duckworth & Co. Ltd., 48 Hoxton Square, London NI 6PB (1993), p. 90 (Bal-i Jibril)

[22] *IQBAL* by Mustansir Mir, 1st. edition published by Iqbal Academy Pakistan, Lahore in 2006, p. 102

[23] *Knowledge and the Sacred*, The Gifford Lectures, 1981 by Seyyed Hossein Nasr, Published by Suhail Academy Lahore, Pakistan , p. 224-5

[24] *The Great Beyond* by Paul Halpern, published by John Wiley and Sons Inc., Hoboken, New Jersey (2004), p. 73.

[25] *The Reconstruction of Religious Thought in Islam* by Dr. Muhammad Iqbal, first published in 1934 by Oxford University Press, reprinted and published by Iqbal Academy Pakistan in 1989, p. 40-41

[26] *Asrar-o Ramooz,* translated by Mian Abdul Rashid published by Sheih Ghulam Ali and Sons, Lahore, 1991, p. 170 and SOS p. 137-8