



## The Contemporary Intellectual Crisis and Lack of Clear Perception of Science and Scientific Thinking

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### Abstract

It seems that the contemporary world, Western and Eastern, is suffering from an acute intellectual crisis and lack of clear perception of science and scientific thinking. This is visible everywhere in the current empirical realities in political, economic, technological, social and educational domains of life. It is, therefore, contended here that there is an urgent need to revisit the so-called metaphysical paradigm of modern Western science and scientific thinking. It is argued the crisis has been caused owing to, on one side, the refusal of the modern world to accept the existence of True, Authentic and Universal Knowledge [the Islamic revelation] and Truth and Reality of Life and the World as expounded by Islamic revelation. It is maintained here that the dominant modern Western metaphysical paradigm of thinking, thought and action is based on speculation and conjecture instead of True Authentic and Universal Knowledge. The Qur'an, in fact, challenges mankind and ask them to adopt the framework of scientific thinking; it invites people to think properly and follow the *right method* of scientific thinking. The main goal of this paper is to provide an exposition of the meaning of true scientific thinking and its *method*.

**Keywords:** *Science, knowledge, method, history and civilization*

### Abstrack

Pada masa ini dunia kontemporari, barat dan timur dilihat sedang berhadapan dengan masalah krisis intelektual yang meruncing dan juga kurangnya persepsi yang jelas tentang sains dan pemikiran saintifik. Keadaan ini dapat dilihat berlaku di pelbagai sudut realiti empirikal semasa meliputi politik, ekonomi, teknologi, sosial dan bidang pendidikan hayat. Oleh itu, perlu ditegaskan di sini bahawa terdapat keperluan mendesak untuk mengkaji semula paradigma metafizik yang dipanggil sebagai sains Barat moden dan pemikiran saintifik. Krisis ini dikatakan berlaku disebabkan di satu pihak, iaitu dunia moden enggan menerima kewujudan ilmu yang benar, asli dan sejagat (wahyu Islam) serta kebenaran dan realiti kehidupan di dunia seperti yang dijelaskan oleh wahyu Islam. Perlu dinyatakan di sini bahawa paradigma Barat moden yang dominan berhubung pemikiran metafizik, fikiran dan tindakan adalah berdasarkan kepada spekulasi dan sangkaan semata-mata bukanlah benar asli dan sejagat. Sebaliknya Al-Qur'an, mencabar umat manusia dan menyuruh mereka untuk menerima pakai rangka pemikiran saintifik; ia mengajak manusia untuk berfikir dengan wajar dan mengikut kaedah pemikiran saintifik yang betul. Matlamat utama penulisan ini adalah untuk memberi penjelasan tentang makna pemikiran saintifik yang sebenar dan kaedahnyanya.

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**Kata Kunci:** *Pengetahuan Sains, kaedah, sejarah dan bertamadun*

## **Introduction**

The contemporary world in general and the Muslim Ummah in particular are suffering from an acute intellectual crisis which can be seen in the lack of clear perception of science and scientific thinking. This is illustrated by the use of terminologies and phrases such as ‘world religions’, ‘scientific traditions in various civilizations’, ‘from modern Western perspective’ ‘before Islam’ etc. The reason is simple. All these phrases and terminologies are frequently used but they do not reflect the real meaning, truth and reality rather the intellectual crisis which has finally resulted in the form of protests of people against their own governments; unrest, unrestricted wars, and un-imaginable production of weapons of mass destruction, undesirable spread of pornographic materials, unprecedented natural calamities, high cost of living and inability of governments to solve these problems. We further argue that the contemporary intellectual paradigm of science and scientific thinking has become problematic due to its inherent fallacies which are the consequences of rejection of True, Authentic and Universal Knowledge generally known as Islamic revealed knowledge or revelation<sup>1</sup>, on one side, and Truth and Reality of Life and the World on the other. As a matter of fact the intellectual crisis happened due to refusal of the modern world to accept, as the foundation of life and society, Truth and Reality of Life and the World, as expounded by the True, Authentic and Universal Knowledge. Our contention is that *thinking* and *thought* which are not based on True, Authentic and Universal Knowledge and in line with Truth and Reality of Life and the World cannot be considered as *scientific*. We further claim that due to the refusal and application of True, Authentic and Universal Knowledge in the modern world, modern man has ultimately depended on speculation and conjecture about the truth and reality of life and the world. Conjecture and speculation finally end up with false notion of life and the world especially concerning the metaphysical dimensions of existence. “*They have no definite knowledge of it, but merely follow conjecture*” (The Qur’an, 4: 157) Hence, we argue that the contemporary crisis in life and society, whose structure is based as a whole, on

conjecture and speculation, is the consequence of the intellectual crisis. Life and society cannot be developed based on conjecture and speculation. They require a sound foundation of thinking and thought, for them to be termed as authentic or *scientific*. The dominant notions of ‘science’ and ‘scientific thinking’ are, therefore, in need of rethinking and proper consideration. The Qur’an declares that it contains in it True, Authentic and Universal Knowledge. Therefore, it gives challenge to mankind that the rejection of True, Authentic and Universal Knowledge tantamount to *unscientific* attitude and approach (Mawdudi, 2006).

The fact is in today’s world ‘science’ is generally defined as the “systematic study” of natural world based on the method of observation and experiment (Sykes, 1982). While in our view the ‘systematic study’ has many shortcomings due to limitations in its subject matter and scope. The limited understanding of science reflects both intellectual crisis and lack of clear perception of science. People have, therefore, failed, in general, to understand the truth and reality of science and scientific thinking. During the periods of ‘Renaissance’ and ‘Enlightenment’ people had refused to accept the True, Authentic and Universal Knowledge. Refusal was done without any examination. Hence, they also failed to understand that on the basis of false foundation of life and the world the notions of ‘science’ and ‘scientific thinking’ and the structure of life and society cannot be developed. Our argument is that the existing notions of science and scientific thinking (Ali, 2009) are not *genuine*. They were developed during modern period in the West based on false notions of Life and the World. The notion of science and scientific thinking being based on conjecture and speculation rather than True, Authentic and Universal Knowledge loses their true meaning and characteristics of being *science*. Furthermore, on the basis of scientific thinking [which must be based on True, Authentic and Universal Knowledge] alone one can understand the Truth and Reality of Life and the World. In this respect, we feel, the data of the Qur’an is very much useful. It helps us to recognise the fact that the basis of life and society cannot be built up on the basis of

conjecture, speculation, imagination, fancies and desires (Mawdudi, 2006).

The truth is that people of the modern world are following a worldview which is not in line with Truth and Reality of Life and the World. Consequently, they have developed the false notion of 'science' and 'scientific thinking'. Currently, the contemporary world, as a whole, is following false notion of 'science' and 'scientific thinking'. The false notions of 'science' and 'scientific thinking' have been instigated due to the lack of True, Authentic and Universal Knowledge. According to the data of the Qur'an, it is the True, Authentic and Universal Knowledge which alone creates the intellectual, critical, creative and scientific culture and tradition (Mawdudi, 2006). It identifies the necessary characteristics and techniques of science and scientific thinking. Hence, it is maintained in this paper that the dominant paradigm of science and scientific thinking is in need of rethinking. In general it is based on speculation, conjecture, imaginations, fancies, and desires (Mawdudi, 2006). Hence, this paper argues that the absence of the foundation of True, Authentic and Universal Knowledge is the root cause of the contemporary intellectual crisis and lack of true perception of science and scientific thinking.

As a methodological principle this paper follows the framework of True, Authentic and Universal Knowledge and the perspective of Truth and Reality of Life and the World. It first presents to establish its point of view, an analysis of the development of meaning and definition of science and its related issues. This is followed by the analysis of the data collected from the Qur'an on the issue of the cause of intellectual crises and lack of clear perception of science and scientific thinking. Finally, it will explain the need of rethinking of science and scientific thinking.

### **The Qur'anic Method of Thinking**

The Qur'an, in fact, challenges mankind and asks people for the purpose of realization of the Truth and Reality of Life and the World to adopt the framework of rational and empirical thinking. It invites people to think rationally with the help of historical and empirical evidences. It considers it the most appropriate and right method of

thinking i.e. scientific thinking. It is made clear, beyond any doubt, in the Qur'an that the right kind of thinking - critical and scientific - must be guided by the True, Authentic and Universal Knowledge (Mawdudi, 2006). The Qur'an also educate people and asks them to get rid of speculations and conjectures otherwise they would not be able to understand the Truth and Reality of Life and the World with certainty in a scientific manner that is correct, true, authentic, realistic, rational, empirical, comprehensive and people oriented way.

### **Development of Science and Scientific Thinking**

A few scholars and thinkers have realised this fact of our history. Hence, they have distinguished the present 'science' as Western science (Nasr, 1993). On the question of science we find various interpretations and definitions. The historical discourse on the issue of science, scientific thinking and scientific tradition has witnessed at least three categories. The first category of science was based on True, Authentic and Universal Knowledge and in line with Truth and Reality of Life and the World. It was called Islamic science. Islamic science was applied in all branches of knowledge. According to the second category, the current use of the term 'science' is taken as an intellectual activity for the study of the natural/ physical world alone (Dampier, 1989). The current and modern use of the term 'science', in reality, refers to a different kind of science i.e. called Western science (Nasr, 1993). But, we prefer to call it the modern Western science as it is the product of the modern period. This science applies a specific method called the method of observation and experiment. This method follows a few steps of hypothesis, observation, experimentation, measurement, data collection, analysis of data, testing and verification etc. (Hume, 1955).

The outcome of this study is called the modern Western science or the modern Western natural sciences or the modern Western scientific knowledge. The abovementioned, notions and steps are also applied for the development of other sciences such as applied sciences or social sciences. Today, no branch of the 'science' or

‘knowledge’ is free from the modern Western perspective.

The current conceptions of the modern Western science, scientific spirit and scientific thinking have become the dominant criteria for judging any piece of knowledge as true, authentic and realistic. Thus, every other claim to knowledge/science is accepted or rejected as being valid or invalid.

It is contended by some scholars such as Nasr, Mehdi Gulshani, Osman Bakr, Ziauddin Sardar and others that this particular view of ‘science’ is not reflecting the truth and reality about the notion of ‘science’. It is neither universal nor comprehensive because it is based on the modern Western worldview. Hence, this modern Western science by some philosophers and thinkers of our times has not been accepted as *genuine* and *universal science*. Therefore, the meaning and philosophy of this second category of science have been questioned (Nasr, 1981). It is further contended that the modern Western science has created so many problems such as environmental crisis, global warming, mass production of weapons, conventional and nuclear. The safety and security of the world and of people are at alarming point. This frightening phenomenon of the modern Western science and its philosophy need redefinition and reorientation to identify the problems concerning certain issues. It is contended by the present writers that this re-examination would help to develop an alternative science – the genuine science to which we prefer to call the Truth-based science - the third category of science.

Those who are unaware of this discourse of the need of Truth-based science or do not agree with this demarcation demonstrate, in fact, their unawareness and still use term ‘science’ without an adjective. But truth remains truth. So, it is clear now that it is the ‘modern Western science’ not *science* calls for re-examination. The truth and reality is that the genuine science was never confined to the study of nature alone as it will be demonstrated in the following pages (Acikgenc, 2014). This modern Western science is presented as systematic knowledge of the physical world. It is produced by applying a particular method by observation and experiment. Other characteristics of it are identified: it examines critically, tests

rigorously and then developed orderly into a system of thought. It implies a method of assessing and understanding knowledge of the natural world. This science is divided into several branches according to their subject matter.

There is a big number of books (Losee, 1993) on *Science* and *Philosophy of Science* but a very few students and scholars know that all those books are not dealing with *genuine science* or *philosophy of genuine science* rather with the modern Western science and its philosophy. One can rightly say that nowadays we do not have books on *science* and *philosophy of science* as they were understood in the past when the idea of ‘science’ was first developed (Acikgenc, 2014). We find today hundreds of books on the modern Western science. All these books have been written and produced from the modern Western secular point of view which was derived from the modern Western worldview, based on the modern Western philosophical thought. And the modern Western philosophical thought was developed based on conjecture and speculation instead of True, Authentic and Universal Knowledge. Before the dawn of modern age the meaning of *science* and its philosophy were ever developed based on True, Authentic and Universal Knowledge.

To avoid confusion and differentiate clearly between *science* and the modern Western science, in this paper the term ‘science’ is not used any more but rather the authors of this paper prefer to use terms such as Truth-based science, Truth-based philosophy of science, Truth-based scientists or Truth-based thinkers (Ali, 2008). The truth and reality is that the idea of science, when it was initially conceived, constructed and developed, was done by those thinkers and scholars who had based their thinking and understanding on True, Authentic and Universal Knowledge and in line with Truth and Reality of Life and the World (Acikgenc, 2014).

We argue that the Truth-based science, conceptualised and developed at the time of its inception, was defined as an intellectual activity for a better, true, correct, authentic, realistic, comprehensive and universal understanding of Life and the World and everything of the world along with the application of rational and empirical methods and skills. This Truth-based

science was replaced during the modern period by the modern Western science (Nasr, 1994). It is this modern Western science, due to its false foundation, which has lost its true meaning, purpose and characteristics and thus creating crises instead of helping to improve the conditions of life.

The current debate and discourse on Islamisation of modern knowledge or Islamisation of modern Western disciplines or Islamisation of modern Western science and its philosophy is a courageous, truthful, realistic and creative response to the deteriorative condition of the world and people. The Islamisation is, in fact, a call for rethinking the modern Western science and its philosophy. We, therefore, argue that nothing in this world is absolutely beyond rethinking except the Truth and Reality of Life and the World. For the purpose of the realization of intellectual crisis and lack of clear perceptions of the idea of science and scientific thinking we need to understand the differences and characteristics of both the modern Western science and Truth-based science. First we present some characteristics of modern Western science.

### **The Modern Western Science, Scientific Thinking and Epistemology**

It is asserted by the modern Western scholars that the sciences that deal with material and physical substance or non-living things are also called the modern Western physical sciences. The modern Western biological sciences, on the other hand, study living bodies and their organism. The modern Western medical sciences study humans as biological systems. It is these modern Western natural sciences which are in particular considered “pure sciences”. It is also claimed that they are developed rigorously and ‘objectively’ based on method of observation and experiment. It is also asserted that through the development of the modern Western science we create new knowledge (Rosenberg, 2000).

The modern Western science and scientific method are considered universally applicable. Furthermore, it is claimed that the modern Western science and scientific thought have become synonymous to civilizational development. One of the consequences of the development of the modern Western science is

the development of technology. Hence, today the term ‘science’ has become the symbol of and almost invariably identified with the modern Western natural sciences (Dampier, 1989).

It is also asserted that the modern Western science not only offers answers to the questions related to the natural phenomenon but to the fundamental philosophical questions as well such as: how can we acquire knowledge of the physical world? In response to this question, they say: by the application of scientific method. In modern Western science, it is also claimed that we reach to right conclusion on the basis of proper method of gathering and assessing evidence, and hence, are supposed to be justified. In this way, this aspect intimately becomes related to the modern Western epistemology and also to the modern Western philosophy of science. According to the modern Western perspective, epistemology is that branch of the modern Western philosophy which raises the questions of the modern Western knowledge: How it is developed? What is its goal? Its philosophy answers the questions that are generally raised in the modern Western epistemology. For example, is there any hierarchy? What is the modern Western scientific method? How does evidence support a theory? Is theory changed in the modern Western science through a rational process? Can we really say that the modern Western scientific theories are true? (Ladyman, 2002). There may be some other questions; the modern Western philosophy of science needs to answer such as what is the status and scope of it in the overall scheme of life and society? We are not concerned here with all those questions which are generally raised in the modern Western philosophy of science. We would limit our discussion to only those epistemological questions which demonstrate the intellectual crisis and lack of clear perception of science and scientific thinking such as the question of the method and aim of the modern Western science; the place and scope of it.

### **An Analysis of Method of Modern Western Science**

We need to raise a fresh question about the method and methodology of the modern Western science because it is said that ‘science’ just does

not describe the world; it also informs us about the explanations of how and why things are as they are. Often this involves describing unobservable causes of things we observe. The central idea of modern Western science is to know - the laws of nature – which becomes more important when we think in terms of intellectual crisis and lack of clear perception of ‘scientific thinking’. The idea of law of nature, no doubt, does exist according to the modern Western philosophy of science but the question of the Originator of the laws of nature is not answered. If it is answered; it is based on the framework of speculation and conjecture instead of and rather than True, Authentic and Universal Knowledge. The framework of conjecture, speculation, assumptions, imaginations, desires and fancies has been accepted. This kind of approach for understanding anything based on conjecture, in our view, loses its credibility to be considered as scientific as the basis of it is uncertain. So, in modern Western science the attention is diverted to the subsidiary questions such as the question of how to know the ultimate nature of things: how the world is made of and how it works etc. These questions have become very important in the modern Western science. Who made this world and why it is made are not the important questions for modern Western philosophy of science. It is also not very important to know and answer who has caused the specific nature to things and also the existence of the world. There is neither a powerful wish nor urge among the scholars to know the metaphysical truth and reality of things based on True, Authentic and Universal Knowledge. The metaphysical truth and reality of things have been denied. The physical world is accepted as the only reality. In order to know the things scientifically, we claim, one must move based on True, Authentic and Universal Knowledge [Islamic revealed knowledge] as there is no other way to know Truth and Reality of Life and the World (Mawdudi, 2006). The truth and reality of life and the world can be known to us only through True, Authentic and Universal Knowledge. This is the challenge of the Qur’an which is given to people of the world (Mawdudi, 2006). Hence, we argue, the main task for any kind of *scientific thinking* is to know the things in a correct, true,

authentic, realistic, comprehensive and universal way. The Qur’an argues that this kind of comprehensive understanding of things is not at all possible for man. It is made possible by Allah SWT by giving people True, Authentic and Universal Knowledge [the Islamic revealed knowledge] (*The Qur’an* 2: 31; 2: 282). On the basis of True, Authentic and Universal Knowledge alone one can obtain a comprehensive understanding. Hence, we claim and conclude that for a comprehensive understanding of anything the application of True, Authentic and Universal Knowledge is one of the fundamental criteria of scientific thinking. It is this True, Authentic and Universal Knowledge through which we can understand Truth and Reality of Life and the World and the things in it. The lack of application of True, Authentic and Universal Knowledge and the absence of a full-fledged discussion about the need of it from the body of modern Western science, is the root cause of both the intellectual crisis and lack of clear perception of science and scientific thinking.

### **The Characteristics of Truth-based Science and Truth-based Scientific Thinking**

According to the Qur’an, it is Allah SWT, the Creator and Sustainer of life and the world, who transmitted the True, Authentic and Universal Knowledge to the Messengers [PBUT] through the process of revelation. It is now contained in the Qur’an wherein it is mentioned that Allah SWT taught man (Mawdudi, 2006). So, being the first teacher of mankind, Allah SWT taught man whatever man needs to know and understand for living a meaningful and better life in this world (Mawdudi, 2006). Allah SWT made it clear that He did not leave man in darkness at the time of his inception on earth rather He taught him the worldview and way of life [Islam] that does not only explain what man has to do in life but also explains how to know things. As a matter of fact, according to the Qur’an, Allah SWT taught man three things: way of knowing; way of doing and way of living. The Qur’an explains that Allah SWT taught man how to understand anything of this world – the method. He, for this purpose, emphasised the full use of ethical [rational] and empirical faculties (Mawdudi, 2006).

Furthermore, it is also made clear that the Qur'an contains the universal values, principles and morals which are indispensable for a good life and society (Mawdudi, 2006). The search for values, principles and morals has not been left for intellectual efforts of man rather the basic and fundamental guidance had always been provided to him. It is made understandable, beyond any doubt, that if anybody ignores this Knowledge and Guidance he will go astray and creates destruction and chaos in life and society (Mawdudi, 2006). It is also made comprehensible to man that he, by nature, by birth, with all faculties and capabilities is not yet all capable to design those principles, values and morals which are necessary for him and society (Mawdudi, 2006). But at the same time, it is also made obvious that he has to make full use of his capabilities and faculties to understand this fact of life. Further, it is said that with this fundamental consciousness he can understand other things. Hence, the True, Authentic and Universal Knowledge is considered as central in the life of man. The development of science and technology and attainment of prosperity and happiness in life are genuinely linked with this Knowledge. The development of all truth-based sciences, the natural, applied and social, was used to demonstrate this Fact/Truth and Reality of Life and the World. All these sciences point to this most fundamental Fact/Reality/Truth of this World (Nasr, 1964).

Hence, we argue without knowing and following the Truth and Reality of Life and the World on the basis of True, Authentic and Universal Knowledge, there is no correct, true, authentic, realistic, comprehensive and universal understanding [scientific] of anything. The consciousness, acceptance and realization of both: True, Authentic and Universal Knowledge as well as Truth and Reality of Life and the World constitute the foundation of Truth-based science and scientific thinking (Nasr, 1968). To possess this consciousness was to realise the spiritual existence of life and the world. The consequence of this realization and confirmation of the existence of True, Authentic and Universal Knowledge and Truth and Reality of Life and the World was the comprehension of the reality of cosmic unity. The awareness of cosmic unity led

to the understanding that Allah SWT has created everything of this universe in an interrelated way that reflects a network of cosmic unity through the cosmic laws governing them. Allah SWT created in this cosmic order several levels of reality not just the physical (Nasr, 1978). The unity in cosmic order maintained by the Creator, Allah SWT, directs the thinking minds to recognise the reality of its creation by a powerful Creator, Allah SWT. This understanding of the cosmic order becomes an observable evidence [proof] of the Existence and Reality of Allah SWT. It goes in accordance with the Qur'anic approach which confirms the unity of cosmos and Unity of Allah SWT (Sardar, 1989).

The spirit which flows from this true, correct, authentic, realistic, comprehensive, and universal understanding of the Existence and Reality of Allah SWT was called the Truth-based science and scientific thinking. Therefore, we argue, there exists, beyond any doubt, the historical and empirical evidences which confirm that the idea of Truth-based science and scientific thinking originated and developed from this consciousness. This Truth-based scientific thinking was illustrated, by all those individuals and group of peoples who followed True, Authentic and Universal Knowledge throughout human history (Nasr, & De Santillana, 1968). In this way, several nations of past participated towards the development of Truth-based sciences, physical or metaphysical. After the revelation of the Qur'an, once again and this time at universal level, the same understanding of the Truth-based science and scientific thinking was emphasised, systematised and further developed. (Bakar, 1991). Truth-based science did not confine to the study of the natural world alone as the modern Western science did rather all other branches of knowledge were equally developed based on the Truth-based scientific thinking (Acikgenc, 2014). The refinement of Truth-based science and scientific thinking always continues. Unfortunately, during the so-called modern period, the basic spirit and the importance of True, Authentic and Universal Knowledge as well as Truth and Reality of Life and the World were cut off from Truth-based science and scientific thinking. New notions of science and scientific thinking – the modern Western science

and scientific thinking - were developed (Iqbal, 2013).

Our contention is that in modern Western science technical sides were emphasised such as observation, experiment, clarity, precision, objectivity, verification etc. In this way, we further argue, a non-scientific approach, which neglected spiritual dimension and emphasised the material substance as reality, was developed and cultivated in the name of 'science' and 'scientific thinking'. 'Science' that reduces reality to the level of physical existence does not represent the whole reality. The Truth-based science, scientific thinking, attitude, frame of mind all were turned down into a non-scientific way. It was fully overlooked that the features of the passion for truth, reality, justice, fair play, the general respect for empirical evidence, and a skilled mind cannot be developed on the basis of false foundation of life and the world. These features alone are not sufficient to qualify some approach or statement to be considered as 'science' or 'scientific' [systematic and authentic understanding]. The genuine science and scientific thinking, we emphasise, must be based on the foundation of Truth and Reality of Life and the World as proclaimed by True, Authentic and Universal Knowledge. The lack of this dimension can be seen in present day modern Western sciences which are full of speculative and conjectural elements especially within their metaphysical foundation. The followers of True, Authentic and Universal Knowledge always emphasised love for conceptual clarity, clear definitions, semantic analysis, logical clarity, precision, fair play, consistency etc. But these features of truth-based science and scientific thinking were never separated from Truth and Reality of Life and the World.

Logic was a tool of truth-based science (Bakar, 1991). It was never conceived based on unauthentic ideas about Truth and Reality of Life and the World. Logic was always linked to Truth and Reality of Life and the World and also to True, Authentic and Universal Knowledge. In the absence of them there was no logic. Hence, genuine logic was always based on Truth-and Reality. The Truth-conscious peoples always established the truth of everything on the basis of Truth-based logic and empirical evidence. The

foundation of Aristotelian logic was not fully aware of Truth and Reality of Life and the World, hence, never developed genuine logic. Hence, they could not perceive metaphysical reality as truth. Truth-based logic was always viewed as an indispensable tool of Truth-based science and scientific inquiry. It was always based on Truth and Reality of Life and the World not outside of it. Therefore, one can say the Truth-based logic was always taken as a form of *hikmah* [wisdom- a form of knowledge] which was repeatedly mentioned in the Qur'an (Bakar, 1991). In Truth-based logic, the followers of Truth and Reality of Life and the World gave equal importance to the clarity, consistency, authenticity, certainty and the existence of True, Authentic and Universal Knowledge. These features of Truth-based science, scientific thinking and logic were achieved based on rigorous ethical [rational] and empirical exercise supported by historical evidence. They were fully aware of the limitation of and the use and misuse of logic, hence, avoided possibility of error with the help of True, Authentic and Universal Knowledge and developed system of Truth-based science, scientific thinking and logic. We claim, they followed Truth-based method because they realised that intellect may be corrupted if it is not utilised within this framework. The lower passion influences this type of intellect (Kalin, et al., 2001). The intellect influenced by lower passions and desires fails to see the Transcendent Reality and ultimately refuses to accept it. When the logic does not function properly to help the reason and intellect, it fails to perceive the Truth and Reality of Life and the World. It gives way to contradictions, conjectures, assumptions and speculations. This is the reason that the argument put forward by some philosophers such as Farabi who argued that we find strong support in the Qur'an for Aristotelian logic or the assertion of al-Ghazzali who embraced Aristotelian logic without question in its entirety do not seem to be in line with the Qur'an (Bakar, 1991). The Truth-based logic became one of the important tools of Truth-based science and scientific thinking. It is indeed one of the unforgettable facts that the term *al-burhan*, one of the names of the Qur'an, used in Truth-based logic reflects to denote the Truth-based scientific method of demonstration or



demonstrative proof (Bakar, 1991). The logic free from the guidance of True, Authentic and Universal Knowledge fails generally to weigh ideas and opinions to arrive at the correct judgement. It can help to understand partially but not comprehensively. This can be seen empirically throughout the philosophical discourse of human history which, no doubt, applied the so-called logic but failed bitterly to perceive the Reality and Truth of Spirituality and accepted secularism, materialism, scientism, relativism, reductionism etc.

Hence, we argue that the reason cut off from True, Authentic and Universal Knowledge as well as Truth and Reality of Life and the World leads to false ideas of rationalism and empiricism. Whereas, the extensive use of logic based on True, Authentic and Universal Knowledge, Truth and Reality always gives rise to correct, authentic, realistic, truthful, universal and comprehensive understanding of anything. The embodiment of the True, Authentic and Universal Knowledge along with Truth-based logic makes the inquiry scientific in its truest sense. The 'logic', 'reason', 'sense perception', 'quality of analysis' etc. were all used under the guidance of True, Authentic and Universal Knowledge and in line with the Truth and Reality of Life and the World. During middle ages, after the revelation of the Qur'an, the method of observation and experiment [which is now known as the method of 'science'] became widespread. The observational and experimental studies were conducted extensively (Ali, 2009). There are some significant aspects of all these observational and experimental studies: they originated based on Truth and Reality of Life and the World; they followed always True, Authentic and Universal Knowledge. The method of observation and experimentation, known as empirical method, was identified and applied in every field of knowledge according to its subject matter and need. Its application was open for all branches of knowledge. There was no claim, like empiricists used to make, that this is the only authentic method. The consciousness of the existence of True, Authentic and Universal Knowledge was always dominant in the minds of Truth-based scientists, philosophers, thinkers, scholars, authors in all most all branches of

knowledge. All methods were considered as reliable according to their subject matter and need.

We argue that the features of creativity and quest for new knowledge which were so much emphasised by the True, Authentic and Universal Knowledge were first overlooked, declined and later on abandoned by the followers of True, Authentic and Universal Knowledge due to some important reasons, such as lack of vision and mission of True, Authentic and Universal Knowledge. Furthermore, the followers of True, Authentic and Universal Knowledge gradually reduced it to the level of religious guidance and sacred knowledge. They treated it in a stagnant manner. Since the time of Ghazzali they focussed on rational method instead of empirical. This turn from empirical to rational was the result of Greek influence (Iqbal, 1994). At the same time, when Roger Bacon learnt this method of Truth-based science and introduced it in Europe, it was separated from True, Authentic and Universal Knowledge and then refined and improved further on secular lines (Iqbal, 1994). Our estimation is that along with this, three other things happened in Europe which resulted in the destruction of Truth-based science and scientific thinking. The method of Truth-based science was cut off from the purpose of life approved by True, Authentic and Universal Knowledge. It was mainly confined to the study of nature for material gains. It gave birth to empiricism, rationalism, relativism etc.

The Truth-based logic and its extensive application helped people to remain within the framework of True, Authentic and Universal Knowledge without denying Truth and Reality of Life and the World. The existence of Allah SWT was accepted as Absolute Truth and Reality. People who enjoyed Truth-based logic did not revolt against Him as the modern Western oriented scientists have done. Before the emergence of modern period, the widespread practice of Truth-based observation and experimentation helped to strengthen the understanding that this world without Allah SWT is meaningless. Sense perception was never taken as the only source of knowledge as happened in the modern period (Al-Attas, 1989).

The Truth-based epistemology thus developed by the followers of Truth and Reality of Life and the World provided all necessary precautions which helped Truth-based philosophy to work on the basis of True, Authentic and Universal Knowledge instead of speculation and conjecture. This Truth-based epistemology confirmed the unitary linked between each and every aspects of life. Thus there took place a revolution in the thought and practice of people. They realised the fundamental position of the reality of unity and equilibrium. As such, it not only gave birth to the new systems of knowledge but also to the idea of the hierarchy and unity of knowledge (Bakar, 1992). All possible systems of knowledge were fully recognised and each was accorded its legitimate place and function within the Truth-based epistemology based on True, Authentic and Universal Knowledge.

We further argue that logical analysis, measurement, verification were all had their legitimate role to play in the Truth-based scientific discoveries. As long as, people were faithful to the Truth and Reality, followed sincerely True, Authentic and Universal Knowledge and maintained the reality of the hierarchy and unity of knowledge, they avoided extremist and unrealistic positions. They accorded legitimate position to every faculty and system of knowledge. One was never sacrificed for the sake of other and vice versa (Bakar, 1992).

Based on True, Authentic and Universal Knowledge it was rationally and empirically became promising for them to recognise that Allah SWT alone is the Absolute Truth and Reality and that everything else is relative. As the Absolute Truth, Allah SWT is the source of all other truths (Al-Faruqi, 1982). This was to admit that the idea of a hierarchy or degrees of relative truths is true and authentic. Man was created with all those faculties which are necessary to study and understand all those relative truths in relations to Absolute Truth. If man is capable by virtue of his constituents and nature, it is because Allah SWT wanted him to be the vicegerent on earth. He was always, since his inception, able to know everything of this world with the guidance of Allah SWT. He had well understood that without True, Authentic and Universal

Knowledge and Allah's given faculties he is nothing. The Qur'an made it explicitly known to the world:

He Who excelled in the creation of all that He created. He originated the creation of man from clay, then made his progeny from the extract of a mean fluid, then He duly proportioned him, and breathed into him of His spirit, and bestowed upon you ears and eyes and hearts. And yet, little thanks do you give. (*The Qur'an* 32: 7-9)

People are, therefore, reminded by the Qur'an that all the faculties of knowing such as memory, imagination, the intellect and heart are granted by Allah SWT (*The Qur'an* 23: 78; 46: 26; 17: 36). Therefore, every single human being has to be grateful to Allah SWT. Man, to be genuine to his faculties, has to, on one side, acknowledge that all the faculties of knowing are not his own property rather they are as an *amanah* [trust] and on the other, realise that he has to use them in a legitimate way (Mawdudi, 2006). Man cannot give them undue place and recognition. The most important dimension of it is to realise and acknowledge the limitation of these faculties. The legitimate use of each faculty implies that they have to be submitted to seek guidance and light from Allah SWT through True, Authentic and Universal Knowledge (Mawdudi, 2006).

The importance and significance of sensual experience was fully recognised and sincerely applied in each branch of knowledge. With the equal force, its limitation was also acknowledged. This realistic and truthful perception of the rightful places of True, Authentic and Universal Knowledge, role of reason and sense perception became known as Truth-based science and scientific thinking. Negligence of which or rejection of it cultivated 'unscientific attitude' and resulted in the acceptance of speculation and conjecture. The ultimate result of which is the development of the modern Western science which has become a source of crisis and chaos as asserted by some modern Western scientists (Capra, 1988). It also became known to all those who followed, on one side, True, Authentic and Universal Knowledge and on the other, adopted rational and empirical method to understand the natural phenomena that there are also certain phenomena and realities which are beyond the capacity of the senses and

reason (Mawdudi, 2006). Even with the help of the most powerful and sophisticated telescope and microscope instruments they cannot be seen.

There exists definitely a non-physical phenomena and reality. The physical phenomena or reality is only an aspect of the whole of Reality. The hierarchy of reality contain both lower level and highest level of realities (Nasr, 1964). The Reality of Allah SWT is the Highest Level of Reality. To see it and acknowledge it, man needs, on one side, the light of the True, Authentic and Universal Knowledge and, on the other, unbiased, unprejudiced mind, a mind free from lower passions, desires, dogmatic, superstitious, preconceived ideas, speculation and conjecture. It was called in the past 'intellect'. To make it simple, we call it guided reason or guided-intellect. The modern Western philosophical and so-called scientific thought is completely free from all these traits. Hence, they failed to see the Truth and Reality of the existence of Allah SWT and the importance and need of True, Authentic and Universal Knowledge (Nasr, 1993).

Our argument is that for the understanding of physical realities in their comprehensive form man needs to free himself from all those blameworthy traits, such as denial of Allah SWT and rejection of True, Authentic and Universal Knowledge, otherwise he would fail to understand them properly. To conduct free intellectual exercise and become scientific in thinking and understanding, as a prerequisite to them, man needs the guidance of True, Authentic and Universal Knowledge (Mawdudi, 2006). The guided-intellect can see and realise that the physical world does not have an independent existence. All physical phenomena owe its existence to Allah SWT (Mawdudi, 2006). The whole universe exists because of the existence of Allah SWT. If this link is cut off from any intellectual activity, especially from 'science' and its 'philosophy', it loses its fundamental features of being 'scientific'. The moment it is cut off from Allah SWT it ceases to be called 'scientific' or 'science'. The Reality and Truth is that Allah SWT created everything and maintains them. He is Living Truth and Absolute Reality. As it is said in the Qur'an:

Allah, the Ever-Living, the Self-Subsisting by Whom all subsist, there is no God but He. Neither slumber seizes Him, nor sleep; to Him belongs all that is in the heavens and all that is in the earth. Who is there who might intercede with him save with his leave? He knows what lies before them and what is hidden from them, whereas they cannot attain to anything of His knowledge save what He wills them to attain, His Dominion overspreads the heavens and the earth, and their upholding wearies Him not. He is All-High, All-Glorious. (*The Qur'an* 2: 255).

The spirit of observation and experiment, in fact, was originated from this Truth and Reality of Allah SWT. Allah SWT asks human beings to observe and experience the world of nature so that they can grasp the spiritual understanding of the Truth and Reality of Life and the World. This Truth-based scientific thinking was always cultivated by the consciousness of Truth and Reality of Allah SWT. There is no room, therefore, for doubt and scepticism in Truth-based scientific activity and thinking. The Truth-based science and scientific thinking have been shaped by the authentic, realistic and truthful understanding and consciousness of both the existence of Allah SWT and True, Authentic and Universal Knowledge. All other truths originate from this Absolute Truth. The Truth-based scientific thinking of observation and experimentation was inspired by the certainty of Allah SWT as the Absolute Truth as well as the source of all truths (Mawdudi, 2006).

Throughout history, in the presence of True, Authentic and Universal Knowledge, the Truth-based philosophers, scientists and their scientific efforts were motivated by the clear understanding that they all were seeking to know some aspects of the Reality of Allah SWT. Nothing was understood in isolation from the Truth and Reality of Allah SWT. For them the natural world was nothing except Allah's knowledge of the universe. To know any aspect of the universe means to know Allah's knowledge of the universe. They were fully aware that whatever truths or knowledge they discovered or developed was not against the True, Authentic and Universal Knowledge. They realised that each bit of truth of this world originated from the same Truth and Reality. Hence, they accepted all

truth coming from Absolute Truth. For them, acceptance of one truth [coming from the study of the physical world] and rejecting another truth [coming from Allah SWT in the form of True, Authentic and Universal Knowledge] was totally irrational, and unscientific. The rationality and scientific thinking demand the acceptance of both the existence of Allah SWT and the True, Authentic and Universal Knowledge. This truth has been fully manifested in the world of nature and in the Qur'an (Mawdudi, 2006). Hence, the readers of the Qur'an were repeatedly asked to observe and experience the signs of Allah SWT which are existent in the universe as well as within the soul of man and in the pages of human history (Mawdudi, 2006). The nature, human body, soul and history were presented by the Qur'an as the means of knowledge. The Qur'an became the first source of knowledge in the light of which reason and sense-perception work. Hence, one of the important characteristics of Truth-based scientific thinking was to see whether the claims to truth are in line with Truth and Reality or not. If the truths discovered by reason or sense-perception are not confirmed or verified by the True, Authentic and Universal Knowledge, they were not accepted as final results and postponed for further investigation. The so-called scientific verification of the modern Western science was one of the many forms of verification, not the only and absolute one. The absolute verification had to be confirmed by the True, Authentic and Universal Knowledge.

The issue of objectivity was never an issue of Truth-based science and scientific thinking (Bakar, 1991). We understand very well that the claim of objectivity is a false claim. There is nothing such as objectivity, it does not exist anywhere; it is only in imaginations and dreams. The reality is that the present day modern Western science and the notion of scientific thinking are interpreted subjectively that is based on the modern Western worldview. There was always a difference between factual aspects of the things and their interpretations. The Truth-based philosophers and scientists followed always and maintained factual aspects as they were seen. For their interpretation they followed only one criterion that is the criteria of Truth and

Reality of Life and the World. Anything, idea or approach which went against it was considered as false and unscientific. They stand always with the fundamental issues of Truth, Reality, justice and fair play. Today anyone can observe that capitalists, communists, socialists, liberalists, modernists, rationalist, empiricists etc. interpret everything from their own perspectives. Therefore, it is not true to argue that the modern Western science is the most objective knowledge of the natural world ever attained in the history of human civilization. The truth is that the modern Western science is not objective. It is not even comprehensive, universal, correct, truthful and realistic especially in terms of its metaphysics; it is partial and Western. It is built and established based on Western norms and values. The Truth-based scientists practiced truth and saw everything in its originality. Throughout human history nations and communities extensively cultivated, developed and improved the empirical approach and scientific thinking (Mawdudi, 2006). After the revelation of the Qur'an, it was further systematised and promoted and further developed by the followers of it. Their perspective was neither modern nor Western. They followed the perspective of Truth and Reality of Life and the World. The quests for truth, reality, justice, fair play etc. were their characteristics.

Contrary to this, the philosophers of modernity, to understand the metaphysical dimension of the world, adopted the speculative method in their discursive philosophy. Under their influence scientists accepted and applied their perspective. Hence, they bitterly failed to eliminate the influences of lower passions and desires. They developed the attitude of prejudice, pride, biased thinking, enmity etc. They always worked under the influence of the quest for intellectual and scientific pursuits for the sake of power (Nasr, 1993).

Their approach was never neutral, impartial and value-free especially during modern period. This is the reason that in today's world, in spite of several claims, all intellectual activities are based on the modern Western perspective and values. Hence, in the pursuit of 'science' and 'scientific thinking', the question was not the discovery of Truth and Reality of Life and the World and the

application of justice, fair play and authentic understanding. They turned their attention to the question of objectivity which was never applied and practiced. Their claim to objectivity, neutrality, impartiality, disinterestedness, value-free attitude in the modern Western science and scientific thinking is based on their modern western secular perspective which makes it a claim beyond the proof of the criteria of truth and reality of life and the world. All the available empirical evidence goes against this. The Qur'an, in a public sense, invites thinking minds and asks them to get rid of the influences of prejudice, pride, biased attitude, enmity etc. We argue that claims for truth and public verification in science must be based on True, Authentic and Universal Knowledge rather than guess and imagination. There is no concept of objective knowledge as such verified by rational arguments and supported by empirical evidence. Knowledge is either based on and in line with Truth and Reality or false understanding of Truth and Reality. The claim to objectivity in the modern Western oriented world regarding the so-called empirical knowledge is baseless, unproved and unprovable. The knowledge related to factual aspects alone cannot be considered objective simply because it is subject to verification by a group of people based on some techniques and procedures. All interpretation must be based on and in line with Truth and Reality of Life and the World and verified by the spirit, values, teachings, and morals of True, Authentic and Universal Knowledge.

The application of Truth, Reality, justices, fair play etc. in all areas of life, in our view, are such noble qualities which are universally applicable. The people of Truth-based science and scientific thinking were very much concerned with the cultivation and acquisition of these qualities. The realization of which is not possible without cultivation of the sense of Presence of Allah SWT and accountability before Him. The sense of pride of White man for power, domination, hegemony, control, conquest etc. has been used to destroy the above mentioned noble qualities in the modern world especially in the domain of the modern Western body of knowledge and science. Hence, in spite of the problems in the modern Western science and knowledge, they have been

elevated to the level of genuine knowledge and genuine science. However, the modern Western body of knowledge and sciences are unable to penetrate beyond the physical substance and realise and acknowledge Truth and Reality of Allah SWT. Man has been cut-off from Allah SWT and reduced to the level of physical existence without having spiritual meaning in life and left for causing chaos and crisis everywhere on earth (Mawdudi, 2006). The universal understanding of spirituality [purposefulness of life] and need of morals has been replaced by the sense of materialism and relativity. The application of the higher standard of justice and fair play are not yet all possible today because the sense of the Presence of Allah SWT and accountability to Him is not cultivated at all. There is no room for True, Authentic and Universal Knowledge.

Justice, fair play and Truth-based science and scientific thinking are interrelated to each other. They are not confined to any particular branch of knowledge. They are applied in all branches of knowledge. The division of empirical and non-empirical sciences do not seem to be realistic. Every branch of knowledge has to be empirical as much as possible (Iqbal, 1994) and must recognise the importance of True, Authentic and Universal Knowledge; rational understanding, along with historical and empirical evidences, is also necessary. This position reveals the fact that there are many levels of truth. Physical reality is only one of them and is intimately linked to Absolute Truth and Reality (Nasr, 1964). For understanding every level of truth one cannot follow a particular method. There can be several forms of knowing truth. Ontological, metaphysical, cosmological, epistemological, methodological studies may follow different methods. What is common between them is that all these studies basically originate from True, Authentic and Universal Knowledge and work in line with Truth and Reality of Life and the World.

The modern Western science is totally different from Truth-based science in terms of goals, methodology, sources of inspiration and philosophical foundation. The place of Truth-based science was and is always subject to the testimony of Truth and Reality of Life and the

World. It worked throughout history under the guidance of True, Authentic and Universal Knowledge (Acikgenc' 2014). No branch of knowledge was isolated from each other rather interrelated because True, Authentic and Universal Knowledge [revelation] was taken as the first source of knowledge. Truth-based science as a specific branch of knowledge in a specific sense did not enjoy unguided enterprise. It was always subject to the guidance. Every branch of knowledge originated under the concept of unity of knowledge (Al-Faruqi, 1982). Hence, the problems of the modern Western science are not the problems of *genuine science*. The problems in and by modern Western science have been created due to the false foundation of it (Al-Attas, 1976). This is the reason that one finds sound reasons to question the existing meaning and characteristics of the modern Western science. In Truth-based science the meaning and characteristics are related to the Truth, Reality and True, Authentic and Universal Knowledge. Its approach is not based on speculation and conjecture. Our contention is that the meaning and characteristics of 'science' must be intimately related to the metaphysical, methodological and cosmological principles derived from True, Authentic and Universal Knowledge. The reality is that all 'sciences' at present are not based on Truth and Reality of Life and the World. The Truth-based sciences were deeply rooted within the framework of the metaphysical, methodological and cosmological sciences which themselves were based on Truth and Reality of Life and the World.

In the modern Western metaphysics of science, the physical world has been accepted as the only reality and spiritual dimension i.e. the hand of Creator has been denied. This conclusion is illegitimate, hence, is considered as an illusion. The True, Authentic and Universal Knowledge sheds the light on the true nature of the relationship between the Absolute and the relative, the eternal and the temporal, the necessary and the contingent. All reality is understood in terms of hierarchy, a multilayered structure. The Absolute Reality, existence of Allah SWT remains as Reality along with other realities. The Absolute Reality is not reduced to the level of existence as matter. Each domain of

reality is studied and understood in its own level (Nasr, 1964). According to this understanding, the nature [the subject matter of the modern Western science] is regarded as the signs of Allah SWT. The modern Western view of nature goes against the view of nature as explained by the True, Authentic and Universal Knowledge. The order of nature is not reduced to the everlasting change and impermanence. Nature was always understood as the combination of both change and permanence. The world of nature is not left to haphazard and senseless changes. Nature is maintained by Allah SWT – All-Powerful – All-Knowledgeable and All-Wise. Hence, in accordance to the Will of Allah SWT all of its parts are formed in such a way that they maintain a meaningful unity and harmony (Nasr, 1964). The nature and order in it created by Allah SWT, from an epistemological point of view, reveal the fact that the reality of things is more than how it appears to the modern Western science. The modern Western philosophy of science failed to see this fact of nature. The reality of the natural world is not confined to the study, analysis and classification, it goes beyond. The true meaning of the cosmos lies in the realization and observation of the true nature of the world which is beyond the quantitative existence.

The reality of the natural world has not been exhausted by the experimental or observational analysis as wrongly understood by the empiricists. It is the power of Allah SWT behind the natural world which generates order and maintains it (Mawdudi, 2006). This unobservable power of Allah SWT is that reality which is not observed and understood in the modern Western science. For the observation and realization of the power of Allah SWT as reality, one does not depend on the sum total of experimental data. He needs something more than that. Hence, we argue that the experimental data is not sufficient for a comprehensive and realistic observation and experience of the reality of the natural world. It requires the light of True, Authentic and Universal Knowledge and its unbiased study. The insufficient data collected by empirical method cannot help us to understand and describe the world in a comprehensive manner as it exists. We need a proper reflection guided by the True, Authentic and Universal Knowledge. As a matter

of fact, the pure empirical method for the understanding of the natural world with its all dimensions, physical and spiritual, is not appropriate. There is nothing such as pure empirical method (Kalin, et al., 2001).

We argue that every method, in spite of its claims for impartiality, is in reality, subject to some perspective and framework within which that method works. The metaphysics of modern Western science, as it is apparent in it, provides a specific perspective and framework to that method. They have out-rightly rejected the existence of True, Authentic and Universal Knowledge. According to the metaphysics of the modern Western science, the recognition and acceptance of True, Authentic and Universal Knowledge is an illusion. Claim to illusion is neither supported by an analysis of the Qur'an nor manifested by empirical evidence.

The modern Western science and Truth-based science both work within the framework of a metaphysics. The metaphysics of Truth-based science being based on True, Authentic and Universal Knowledge recognises and accepts the hierarchy of being and knowledge. The recognition of this hierarchy guarantees the true and correct understanding of the world of nature. It also checks the tendencies of reductionism, rationalism and empiricism. All the things of the natural world are seen and studied in their proper and original places. A kind of discipline and justice is observed between all things of this world. This approach of the Truth-based science for the study of the natural world did not create any kind of environmental pollution or crisis in the past. This realistic and Truth-based epistemological position granted to the Truth-based natural sciences a correct meaning and rightful place in the scheme of hierarchy of knowledge (Bakar, 1992). The notion of realism of the modern Western science, as the acceptance of an objective and independent world, did not take any recognition in Truth-based science. The fact of man's capabilities was correctly understood. The fact is that man with his capabilities and faculties is capable to understand the existence of Allah SWT and the world of nature around him, if he uses his intellect and sense-perception under the guidance of True, Authentic and Universal Knowledge. There was

no room for man to develop the fallacy of 'greater capacity' of man 'for self-direction' as claimed by modernity (Ferrara, 1993).

Hence, we argue that the metaphysics [the study of unseen reality of the physical world], as an all-inclusive science, was developed based on True, Authentic and Universal Knowledge. Hence, the Truth-based metaphysicians used intellect properly. The guided-intellect was in a position to explore and know the higher levels of reality (Nasr, 1993). Thus, like the Truth-based metaphysics, the Truth-based science was capable to describe the world of nature in a comprehensive manner. Truth-based science and other branches of knowledge did investigate the reality of the physical world as it exists and works on the Command of Allah SWT. It was through the guided-intellect, aided by empirical tools and historical evidence, that the understanding of the world of nature became a reality. The unity and interrelatedness of the world of nature, originated from the Unity of Allah SWT, was fully realised (Kalin, 2001). The understanding and realization of the existence of Allah SWT, was not the result of some myths and illusions but rather a rigorous ethical [rational], analytical and empirical exercise. From Truth-based ontological and Truth-based metaphysical point of view, the world of nature originated from an Ever-Living source – Allah SWT (Al-Faruqi, 1982). Hence, the main goal of all branches of Truth-based sciences was to unveil the underlying unity and interrelatedness of all things that exist. The reality of the world of nature was seen and understood as a well-connected unity in which the individual bits and pieces as the subject matter of Truth-based science were to be found. The acceptance and realization of the preconceived and relational unity as a given fact was one of the distinct characteristics of Truth-based science that revealed the balance between the whole and the part, and between the one and the many. (Kalin, 2001).

It was known to the philosophers and scientists who based their intellectual search on True, Authentic and Universal Knowledge that the so-called pure and simple ideas of human beings always assume certain things if they are not originated in the light of True, Authentic and

Universal Knowledge (Ali, 2009). The same was applicable to the sense-data or sense-perception. The recognition and acknowledgement of Allah SWT was the main condition of all Truth-based scientific knowledge. Hence, every act of knowledge was indebted to the All-inclusive Reality of Allah SWT.

## **Conclusion**

### **Need for Rethinking the Modern Western Science**

The modern Western science, its historical formation, its philosophical premises and claims are all the result of the modern Western philosophical thought [metaphysical, methodological and cosmological]. The questioning of the meaning and characteristics of the modern Western science are neither motivated due to the catastrophic events brought about by the modern Western science nor even by a mere academic and historical interest. The sense of criticism has been generated by a genuine reading of the Qur'an, on one side, and on the other, the metaphysical claims of the modern Western philosophical thought. Inspired by the data of the Qur'an, we argue that the modern Western science needs a rethinking and re-conceptualisation as it is operating within a framework which is seriously misguided in which everything is reduced to pure quantity and by which modern man is made to think that all of his problems can ultimately be resolved by further development in the modern Western science (Kalin, 2001). The spiritual realities have been reduced to unreal and redundant, or at least not relevant to the modern world as understood by the modern Western science (Kalin, 2001). The rise of the modern Western science has not been grounded on the concrete facts of the metaphysical world but rather on the basis of some philosophical assumptions. The metaphysical outlook of the modern Western science is totally different from the Truth and Reality of Life and the World. Hence, the philosophical and metaphysical grounds of justification of the modern Western science are under scrutiny rather than its experimental dimension. In other words, the science and its philosophy which deal with the genuine aspects

of science such as why do we give preference to scientific method over rational; the actual conditions of 'scientific' experiment and measurement are not questioned in it's entirety. No one contending with the idea of 'science' as such but rather it's metaphysical and philosophical under currents which have crossed their legitimate boundaries. One can say, safely, all the aspects of philosophy of 'science' are not in reality under re-examination but some of them especially the metaphysics of 'science' – the unobservable aspects of science - such as aim, place and role of science.

The examination of both the modern Western science and the Truth-based science explicitly sheds the light on the need of revival and development of genuine science and scientific thinking. This indicates that there definitely exists an intellectual crisis and lack of clear perception of science and scientific thinking. Due to this, we conclude, 'science' was confined to the study of natural world and its scope was understood in a limited sense. Hence, a good number of scholars and students failed to realise that there exists three categories of science. First category of science and scientific thinking was developed by those thinkers and scholars who had identified and recognised the existence of True, Authentic and Universal Knowledge with Truth and Reality of Life and the World. Based on the recognition and acknowledgement of Truth and Reality of Allah SWT they developed a system of understanding. The most reliable knowledge and its systems were called respectively 'science', 'scientific thinking' and 'scientific method'.

During modern period 'science', 'scientific thinking' and 'scientific method' were initially corrupted and later on cut off from both: True, Authentic and Universal Knowledge as well as Truth and Reality of Life and the World. The most important source revelation of thinking and understanding was replaced by conjecture and speculation. Thus, there emerged a pseudo-science, pseudo-scientific thinking and pseudo-scientific method. Whatever, today exists in the name of 'science', 'scientific thinking' and 'scientific method' are in fact pseudo-science, pseudo-scientific thinking and pseudo-scientific method. These are now being called by some



thinkers as the modern Western science and scientific thinking. These being based on false foundation of conjecture and speculation have brought in life and society unprecedented chaos and crisis. Hence, some Truth-conscious thinkers initiated a debate in favour of the movement of Islamization of the modern Western science and its philosophy for rethinking and redefinition of the foundation of modern Western science and scientific thinking. We have suggested here that the resultant 'science' and 'scientific thinking' should be called as Truth-based science and Truth-based scientific thinking. The main characteristics of Truth-based science and Truth-based scientific thinking include:

1. The acceptance of the existence of True, Authentic and Universal Knowledge
2. The recognition and acknowledgement of Allah SWT as the Source of True, Authentic and Universal Knowledge
3. The recognition and acknowledgement of Truth and Reality of Life and the World
4. The application of True, Authentic and Universal Knowledge and Truth and Reality of Life and the World throughout the process of scientific thinking and understanding
5. The acceptance and application of universal principles and moral values given by the True, Authentic and Universal Knowledge throughout the process of scientific thinking and understanding
6. The acceptance of unity and interrelatedness among each and every branch of knowledge or science
7. The acceptance and application of Truth-based science and Truth-based scientific thinking in all aspects of life and society
8. Finally, the true, correct, realistic, authentic, comprehensive and universal understanding of each and everything of this world, life and society with the use of rational, historical and empirical tools.

Based on the above facts of contemporary world one can now understand clearly the nature of intellectual crisis and lack of clear perception of science and scientific thinking. Hence, we need to revive the Truth-based science and Truth-based scientific thinking.

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