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From Science to Philosophy: A Look Inside

As we know, science has two meanings. In one sense, it conveys absolute awareness. In logic, it is referred to as the picture an object makes in the mind. Its second meaning pertains to empirical sciences, which include studying the relationships among phenomena in order to discover a law. Understanding and science are quite distinct from each other; cognition is absolute perception, and there are two kinds of understanding:

- a) Initial Understanding: includes the reflection of an observable phenomenon, like the face of a person or a tree, in the mind, or the perception of an unobservable fact, like realizing justice and beauty.
- b) Continuous Understanding: involves the continuation of the reflection of initial understanding in the mind. This type of understanding was called imaginative cognition by ancient philosophers.

We cannot find a comprehensive definition for science on which all scholars and intellectuals would agree. Some of them have considered science as the reflection of facts in the human mind. They do not consider mental activities to have a significant role in the development of science, for if a topic is to fall into scientific domains, omission, selection, secondary knowledge of the realities reflected in the mind, imagining them, their dependence on laws and rules, and also the possibility of their breaking away from the old laws and rules owing to new discoveries, are other elements necessary for knowledge.

The Definition of Science

Science involves discovering the fact whose general occurrence is independent upon the self and cognitive tools of man's existence and establishing a relationship with it. Any theorem depicting such a discovery can be called a scientific theorem.

Any scientific theorem based on facts consists of components that may disrupt the whole theorem by their least change. For example, changes in the relationship of the observer and the facts, i.e. any shift in his line of sight or distance from the object, will alter the entire scientific theorem.

Thus, science is the recognition of phenomena accompanied by the complete domination of man's soul over them – therefore, not all forms of imagination or perception can be called recognition; the domination of the soul over the issue is essential. Science is one of the human self's discovery activities, not merely a reflection and subsequent perception.

The Levels of Science

Regardless of pre-determined principles, science can be classified into two degrees:

- 1– The beginning level of science includes the pure reflection of a subject into the mind by means of our senses and other devices. At this level, our mind is like a mirror except for issues without observable effects, like causality, which is far different from seeing something in the mirror. This level is called "prescience."
- 2- In the next level, the subject reflected in the mind falls into the streams of side information, concentration and universal laws, and principles. We now have a clearer knowledge of the subject, for it is no longer a mere reflection. In this step, the mind learns a lot about a phenomenon, and begins to discover how it relates to other phenomena. For example, when observing a leaf, the mental awareness of the observer does not only make him study the physical aspects of the leaf; he will go beyond that and study its other aspects, considering it as a link of the chain of the universe.

Considering science according to the state of mind the scientist may be in, science will have three steps:

- a) Elementary: in this step, the mind encounters a great deal of certainties. Any phenomenon man realizes is considered as a separate fact.
- a) Intermediate: the mind encounters various aspects of phenomena, and figures them out, provided there is no conflict between them; thus, the mind passes doubt and enters the higher stage.
- b) Advanced: the mind is at the peak of its awareness here, and reaches complete certainty by means of total knowledge of all phenomena.

Factors that Make Man Seek Science

The basic factor that arouses the interest for science in man is the necessity for a correct, clear relationship with the facts that surround the human character. Such a necessity arises from the "self–love," or the "need for self–preservation."

If the need for science persists, the necessity to establish a correct, clear relationship with facts can appear in various ways. In other words, people recognize facts by means of different factors, namely:

1- Expanding the dominance of the "self" upon nature in order to make use of its physical and spiritual

benefits,

- 2- The enjoyment of science,
- 3- Eagerness for discovering facts,
- 4- Literal advantage-seeking, whether the greed for wealth, fame or popularity.
- 5- Spiritual flourish and elevation through establishing contact with the truth.

Each of the above-mentioned factors is rooted in self-preservation and the perfection of the soul, and has advanced science throughout history. The third and fifth factors were more dominant in the past, but nowadays the factors which mostly aid man to govern nature are considered more significant.

Endeavors toward the flourishing of the soul are considered by some philosophers as the highest aim of philosophy.

Islamic philosophers also believe the primary purpose of seeking science to be perfecting the soul and flourishing the spirit.

Scientific Laws

What makes a law scientific? What criteria make scientific laws? Various answers have been posed, each of which cast light on one aspect of the question. For instance, when a thinker says, "A scientific law is a theorem that is repeated in the observable, physical world," his statement does not conflict much with another thinker's statement.

"A scientific law is a theorem applicable and compatible to numerous cases, and is general enough to apply to more than one person or one case." Thus, both thinkers state that if a phenomenon cannot apply to more than one case, it cannot be a scientific law. So, all thinkers agree that partial, specific cases and facts which only arise at times, never qualify as a scientific law, even if they still may be worth studying from a scientific point of view.

Likewise, when a thinker says, "Every scientific law proves that any phenomenon arising in the physical, observable world depends on the existence of certain circumstances and the absence of inhibiting factors which, if distorted, the phenomenon will fall apart," describes the same aspect about scientific laws as this statement, "If there were no order and harmony in the universe, there would be no laws in human knowledge, either." Such theories not only do not conflict as definitions of scientific laws, but even verify one another, studying the same truth from various – and very useful –points of view.

Generally speaking, a scientific law is a general theorem showing a harmonious process in the universe, the occurrence of which calls for certain conditions and circumstances; if any of the required conditions are not fulfilled, the process cannot take place. The continuation of the needed circumstances make the

process last, and the continuation the conditions provide is what gives the scientific law its generality.

When taking a scientific law into consideration, the following four aspects should be studied about it:

1– The Reality of a Scientific Law is the harmony existing in nature, protected by God. If we do not believe in God, we will have no logical way to account for the harmony and order in nature, the continuation of which is the origin of scientific laws.

As we know, there are several theories on the laws of nature:

- a) Laws are innate,
- b) Laws are not innate, or the instructional the theory about laws
- c) The theory of observable, orderly symmetries,
- d) Laws are conventional.

In the first theory, the scientific law discovers the innate why others are related to other phenomena. In other words, it is unsolved how the original law is to be interpreted. The other problem with this theory is that the internal relationships and characteristics of an action are considered absolutely relative. Characteristics that are innate and internal to one process may be external in another.

The instructional theory, which we approve of, states that there is no extended rope to pull phenomena after each other, and prove that Phenomenon A must definitely be followed by Phenomenon B. We have failed to directly observe the essential relationships that form the laws of nature even with the most accurate tools. We know that the essential relationships that make up the laws of nature are not mental, and that the laws of nature show each scientist various constants that science is based on. Will there be a day when we can observe these constants? Thus, the best of these theories on the nature of the laws of nature is the instructional one, for it accounts for the more important hows and whys.

According to the instructional theory, the universe and everything in it are constantly changing, for God's blessing flows into it from the world of supernatural. Jalal-addin Muhammad Molawi (Rumi) has supported the instructional theory in these verses of his poetry:

شد مبدّل آب این جو چند بار عکس ماه و عکس اختر برقرار

(Many centuries and eras have gone by, but the reflection of the moon shining on the stream of times is still coming from the same moon. Justice, for instance, is still as it was; greatness has remained unchanged. It is only the centuries and the people who have changed. O Noble One! Centuries have gone by, but truly original human concepts and virtues are still standing firm. The water in the stream of the universe keeps changing by the moment – not even two moments are the same – but the picture reflected upon the water from the moon and the stars (the truth) is firm and steady. Thus, the basis of the reflection of the moon and the stars cannot be on the water; it must be connected to higher things.)

In fact, Jalal-addin Muhammad Molawi (Rumi) is pointing out that time passes us by, relationships change and peoples and social trends evolve, some disappear forever, but the basic concepts and truth about man and the universe prevail firmly.

The instructional theory believes that the creatures of the universe do not innately possess the ability to continue their existence, but receive it from a higher, greater world. In other words, the fact that A must have the Characteristic B, or B must be the result of A is not their innate quality, but divine blessing. Let us quote from Albert Einstein: "I consider God the protector of laws."

And also from Max Plank:

"A physicist's ideal is to externally discover the truth; yet, his sole tool – his devices of measurement – never tells him anything about the real world. Measures are merely doubtful messages to him. As Helmholtz believes, they are signals the real world sends him, and he tries to make a conclusion from them, just like a linguist attempting to read a document found from a lost civilization. In order to achieve any results, the linguist must accept the fact that the document has some meaning. Likewise, the physicist has to base his work on the rule that the universe follows laws we cannot comprehend."

Bertrand Russell believes that by imagining that the realities about the universe come from another eternal world, we will have a pleasant picture of our world.

2– How Scientific Laws Are Discovered: the first factor in discovering scientific laws is the concrete belief and intelligent understanding of the fact that no phenomenon in the world is without a law. If a scientist tends to discover the laws of nature, he must basically have faith in the harmony in the universe. As Einstein writes:

"For even the slightest rays of intelligence and logic to be able to shine on the world, deep faith that the universe is harmonious is essential. A burning desire to understand is necessary. Men like Newton and

Kepler undoubtedly had such faith and desire."

Ever since man became capable of relating to other creatures from a scientific point of view, his primary motive for discovering the laws of the universe arose.

The steps the mind must go through in order to discover a scientific law are:

- a) The communication between his senses and tools with the subject.
- b) Experiencing and completing the observation by means of the senses and technical tools. In this step, trial and error observations are carried out until the scientific law is established.
- c) In the third step, the mind proceeds to consider the puzzling points, and deletes those that do not comply with the law studied.
- d) The last step includes a general theorem in the mind of the researcher forming a law, abstracting itself from observable cases in the world.
- 3– The generality of the scientific law, and its origin: A theorem cannot become a scientific law unless it applies to a great many cases. The generality of a law originates from the continual order dominating nature, which brings about effects and similar results. The two factors that influence the generality of scientific law are:
- a) The generality of the characteristics found in all creatures, like the law of self-preservation. The generality of the characteristics among creatures is a result of the experiencing and generalizing all cases concerning the subject. For example, in order to study reproduction in living creatures, all animals must be studied. Direct observation of every case is, however, quite difficult, but observing a large number of them can lead to a generality, and turn the hypothesis into a scientific theorem.

Experiencing each single case is neither possible nor necessary. By realizing the original identity and elements of a subject, a general theory about its cases can be presented. For instance, when we discover the identity of water by means of knowing its basic elements, we may consider it as a scientific theory, and present general principles on it. Nevertheless, the mere discovery of identity is not sufficient in order to discover all forms of a kind, and all characteristics must be taken into consideration. General knowledge about a certain animal, for example, cannot mean knowing about all animals.

- b) Abstracting the facts about the universe and understanding how they are related; we call this abstract composition, which involves mental activity aiming to find the identity of facts not needing observation of all cases, like understanding numbers, geometric shapes and the principles concerning them. $2 \times 2 = 4$, for instance, is a result of abstracting numbers and the relationships among them.
- 4- The criteria for being scientifically valuable: any fact identifiable according to the following aspects can be considered as a scientific subject. In other words, the characteristics a scientific subject should

have are:

- a) The possibility of determining its identity and characteristics,
- b) The possibility of studying the conditions which promote and /or inhibit its occurrence,
- c) The feasibility of studying and logically calculating its effects and results,
- d) The feasibility of distinguishing cyclic phenomena (like the four seasons) from those phenomena that are related by means of a cause–and–effect relationship,
- e) The phenomenon should be comparable to its similar and opposite cases,
- f) The principles and laws governing scientific laws (such as the impossibility of combining opposites in philosophy, two opposites neutralizing each other, and many others) should apply to it.

Thus, many natural phenomena like mines and trees, and also social, economic, political, and psychological topics, and even valued facts such as justice and duty can be studied scientifically.

Therefore, higher facts like dignity, virtue, duty, justice, etc, can be investigated scientifically in the same manner as physical phenomena can. Justice, for example, can be studied scientifically if these six characteristics are taken into consideration:

- 1– Justice is a topic that has a definite identity and can be defined. The identity of justice is "behaving in compliance with law," or in fact the innate quality that prevents man from breaking the law.
- 2- Justice follows the cause-and-effect law. It cannot occur in man's life without a cause. Justice cannot deviate from the cause-and-effect law.
- 3– Justice keeps man away from committing evil deeds and falling into psychological disorders, and can also make his free will flourish. It is impossible to imagine man without this quality, which motivates him toward the good and dutifulness.
- 4- It is not possible to have justice without its effects and results. Justice certainly brings about outcomes, which must be identifiable, for justice itself is identifiable, too. For example, scientific research can show that just people are well-balanced, confident, and enjoy a good reputation in their society.
- 5- As other scientific topics, justice is also comparable with similar cases. Justice can be compared with other human virtues.
- 6- Certain conditions and circumstances are required before justice can embrace reality. Not everything can provide those conditions, which is also the case for any physical phenomenon to occur, too.

The Definitions of Philosophy

Ever since thought and intellect arose, many definitions for philosophy were presented throughout the East and the West. Having studied them, we will discuss three groups of them:

- 1– Philosophy means, Efforts towards knowing the causes, effects, and the analytical and combination flows in a problem. Once a question is posed about a problem, the first step toward its philosophical analysis has been taken.
- 2- Philosophy is the mental activity in these five domains:
- a) The fundamental principles of knowledge: Is there any reality if we ignore the ego? Can realities really be known? If they can, how and how much?
- b) Issues prior to the formation of scientific theorems, such as the objects in the observable world can be separated up to a point where further separation is impossible. This philosophical perception had been accepted before science had discovered the facts about atoms and molecules. Is the order in the universe in its particles where laws are abstracted or is it non-innate and non-innate, and laws are conventional?
- c) The problems that arise after making contact between scientific laws and facts. For instance, when science discusses the various kinds of movement in nature, the movement of creatures can be used as the basis of a series of philosophical problems.
- d) Problems that arise simultaneous with the arising or continuing of scientific theorems, such as the mortality or immortality of matter, time, space, and the basics about values and virtues. In any period, with our scientific knowledge reaching a certain level, such theorems and concepts come into the eye of human thought, too.
- e) Other issues that fall into philosophical discussions concern the characteristics of the "self," and its supernatural activities, like the survival of the "ego" throughout man's life, the constant qualities of the human self or the abstraction of generalities and numbers and concepts that balanced, sound minds are capable of.
- 3– The knowledge caused by "scientific understanding, guesses, innovations, inspirations and observations," is called philosophy. For example, science shows the order in nature, and the perceptions we get from guessing prove that natural flows are not baseless; both of them show that the universe must have a meaning and a highly significant rhythm. Some people realize the glory and elegance of nature by means of evidence and observation, which is also a form of philosophical perception.

The Principles of Philosophical Systems

Philosophical systems are based on two kinds of principles:

- 1- Established principles that prove philosophical systems, and are two kinds:
- a) Principles that have established themselves in Eastern and Western philosophical schools throughout the history of human thought, such as Aristotelian philosophy eras ago, medieval abstraction principles, and positivist philosophies nowadays.
- b) Established principles that are dynamic and unlimited, like the principle of the necessity of discovering and knowing realities, perfection–seeking and greatness–seeking by man, which is one of significance in philosophy.
- 2- The principles and mental activity of the intellectuals based on pure reasoning, abstraction and principles of imagination. Sometimes an intellectual's perceptions so strongly dominate his spiritual states that they can even fatalistically justify his thoughts, and consider them as absolute. For instance, philosophers like Machiavelli and Hobbes believed that the human nature is pure evil with such certainty and realism that they could not imagine anything else to be true.

The intellectual is deceived by the fatalistic justification of the domination of his hidden spiritual levels. Some intellectuals like Machiavelli and Hobbes believe so firmly that the human nature is pure evil that it had occupied all of their mental states, becoming their internal, active element; they were so firm in their claim that it seems they had created man themselves.

We should not think that all intellectuals produce their thoughts regardless of all absolutes or imaginations. Sometimes the intellectual becomes so passionately prejudiced about an issue that it controls his spirit deeply, making him ignore some realities.

The Criterion for a Subject Being Scientific or Philosophical

It is the researcher or the observer's approach that determines whether a subject is scientific or philosophical. How observers see the relationship between the realities and facts in the universe can influence the research – in fact, this relationship can define the individual's investigation as being scientific, philosophical, or imaginary.

The scientific or philosophical nature depends, in other words, on how the observer relates to the reality. If he pays attention to the superficial aspects of the subject, his knowledge will be scientific; if he focuses on the principles and fundamentals of knowledge concerning the subject, his knowledge will be philosophical. There are four principles about this:

1- The realities and facts in the universe are interrelated. In order to scientifically study a subject, it must

be studied clearly determined from various aspects and points of view. Thus, any scientific theorem involves a reflection of the selection and determination of a subject (realities current in the external world) and serious efforts to explore aspect or aspects of the focused current reality.

2- The universe is very vast, and man's mental and spiritual activities are greatly varied; thus, the contents of scientific theorems should never be regarded as absolute and continual explorations and research is always needed. As Jalal-addin Muhammad Molawi says,

(Don't let yourself get stuck in the past and the old; remember that your current year is worth more than your last three years altogether. What does all that exists indicate? Another world. The newness of the present is the fading away of the old. New days, new nights, new problems, new gardens; each breath signals a new idea in new clothes. Though the universe may seem limited like a stream, but it continually flows on; where does it originate from? Where does all the new come from? Where does all the old go off to? Indeed, beyond what we see lies an endless world.)

- 3– From any scientific theorem, many analytical and combination theorems can be derived. In other words, when a reality is determined as a scientific theorem for an observer, it can become the starting point for his progress to analyze and combine things and make a great deal of scientific theorems.
- 4- No clear issue exists without there being theoretical theorems around it, and vice versa. Thus, no theoretical issue is without an apparent theorem, either. The farther you get from the issue you are scientifically studying, the slower your progress will be after some time, for the path will get darker and darker.

A Scholar's Philosophical Rise

Provided that the developed thinker is not confined to pre-established mental and spiritual principles, he can discover delicate scientific theorems by means of his effort, accuracy and passion, and descend to exploring the highest secrets of the universe. Such advance can happen in both purely natural sciences and also the humanities. For instance, Niels Bohr, the renowned physicist, had to consult the philosophy of the ancient Chinese intellectual, Laozi, and use one of his philosophical principles:

"In the great theatre of existence, we are both actors and spectators."

Another scientist who explored many of the amazing secrets of the universe and the relationship between nature and the supernatural was Max Planck. He said:

"Tending to believe that powerful, mysterious factors are at work in this world is one of the most significant characteristics of our times."

"The fact that while researching on the phenomena and processes of nature we try to omit all 'ifs' and 'maybes' and reach what is essentially necessary, shows that our endeavors are continually dependent upon something vital far beyond the relative – something absolute, eternal. That is what we want to reach. I believe that this is not a quality only of physics, but all sciences."

Hence, we see how purely scientific theorems can provide the grounds to rise to the highest of philosophical and supernatural issues.

Researchers and scientists who possess deep insight and sharp observation, like Albert Einstein and Max Planck, are able to see higher aspects of the universe – things unintelligible to those who devote themselves to nature. Nature scientists of pure mind and accurate actions can use their knowledge of this world to reach "evidence about the perfect absolute," achieving a certain originality and brilliance. Thus, these mountains, jungles and fields – though seeming to be obeying purely natural laws – can be seen as meaningful parts of a meaningful whole that possesses a great rhythm having made the ascend.

The Essence of Supernatural Knowledge

Supernatural knowledge is of crucial importance to man. The reasons for this are:

- a) Man's curiosity makes him not confine his study of the facts about the world to the apparent relationships; he attempts to get into the depth of the fact, and explore all their aspects.
- b) Experimental sciences are not capable of answering all of man's fundamental questions. The human mind tends to move from the details up to the generalities, and explore the principles and foundations of the facts about the world. Science cannot do him much help here.

c) If man's intense need to discover the fundamentals of the world is to be fulfilled, and the anxiety created by the incapability of man in solving the basic problems on knowledge is to be quenched, highly supernatural concepts and issues are necessary.

We must keep in mind that the supernatural knowledge we believe necessary is one that pays considerable attention to not only intelligence and wisdom, but also the purification of the human will; it prevents man from abusing his relationship with himself and the truth. Supernatural knowledge defines the range, level and harmony of natural sciences. Supernatural knowledge is not limited to the knowledge of the facts about the world; it should discover what is useful to man's development and emancipation. When supernatural knowledge does not ignore the realities about human life, it will lead to these advantages:

- 1- Achieving such knowledge, man will regard the other sciences he has as part of his supernatural knowledge;
- 2- It presents man with the principles and fundamentals of knowledge and discovery, enabling him to find his ultimate aims.
- 3- Natural sciences identify the components of nature for us, but they say nothing about the highest of its principles and the purpose of its creation; supernatural knowledge, however, reveals not only the ultimate principles and ends, but also provides man with the most elevated of feelings and emotions. It shows him the highest aim of life. Despite all the recent scientific advance, attention to the philosophy of life has unfortunately not only not increased, but rather diminished.
- 4– If man defies supernatural knowledge, his knowledge will be limited to phenomena and their interrelations. He would ignore the discovery of the real truth of what they all depend on.
- 5- Supernatural knowledge is higher than all forms of human knowledge, not at their service, for it is not confined to the discovery of short-lived events and mortal phenomena. "Supernatural knowledge, the pinnacle of which is the knowledge of God, cannot be regarded as a device." It is far too high to be that. Without paying attention to knowledge about God, man cannot make any spiritual advance.

Ever since late 17th century, the West has ignored the supernatural. The viewpoints that have led to this ignorance are:

a) Auguste Comte – who divided the history of mankind into divine, philosophical and scientific periods – and some others believe that we are living in the era of science, not philosophy, so there is no need for talk about the supernatural. We must say that if philosophical issues were unnecessary, there would not be so much discussion about the highest of philosophical matters between philosophers during the last few centuries. Comte has categorized history based on human cognition.

For instance, he believes that during the divine period, when man was unable to understand the reasons

underlying natural phenomena, he assumed that they had supernatural reasons, but now that man has discovered how they happen, he does not need supernatural elaboration for physical phenomena. Yet, understanding philosophical issues requires a great deal of mental effort, and man has to be at the peak of his mental development – which Comte believes is our era – to understand them. Furthermore, if we accept Comte's categorization, we cannot logically interpret the philosophical schools of thought before Jesus Christ was born, or even the medieval ones.

b) Another reason why the supernatural has been ignored is that man feels he has no need for advanced philosophical issues now that science has made immense progress; since he has been able to make contact with phenomena by means of scientific developments for a few centuries, he thinks there is no room for philosophical discussions any more. Those who support this belief have forgotten that experimental sciences are too limited to be able to answer certain philosophical questions.

For example, the human mind is interested in moving from the specific to the general and vice versa, which is beyond what science can do for him.

c) Combining scientific methods with philosophical ones by philosophers of the past also led to the neglect toward the supernatural. In the past, scientific and philosophical problems were intertwined, and philosophers did not necessarily use scientific methods to solve scientific problems, so some people have come to think that only scientific methods are to be used for studying phenomena, and philosophy should be put aside totally. They ignore the important fact that separating science from philosophy and all their issues and problems does not omit one of them in favor of the other. Philosophy deals with things that science can never consider.

The supernatural should be protected from superficial approach. Philosophy is not a science easily presentable to people. However simplified advanced philosophical issues may become, they will only torture the average mind, for they are far above it to be fathomed.

These days, some intellectuals have fallen into superficial approach, and try to present the highest of philosophical concepts in a way the public can enjoy. Although presenting thoughts in a simple way is important, it should not fall into superficiality, where even supernatural issues can be made understandable to the public. Having studied some philosophical books and terms briefly, some people think they can easily understand them, so they begin giving opinions and remarks about it.

The Analytical Method or the Combination Method?

One of the issues in scientific and philosophical discussions and debates is which method is more suitable: analytical or combination. Some philosophers defend the analytical method, believing that a phenomenon must be analyzed into its components up to a point where further separation is not possible, and then it can be studied and explored.

Bertrand Russell, for instance, was one of the intellectuals who named his method "logical atomism." He believes, "The only label I have ever given to method is 'logical atomism,' although I have always avoided being labeled with something. I believe that logical atomism means the only way of discovering the nature of objects is analysis as exhaustively as possible; the resulting components are 'logical atoms' – or that's what I've named them – for they are not small physical particles, [but] components of ideas, outside the issues concerned with the structure of things."

The problem with purely analytical knowledge and discovery is that it studies a phenomenon totally regardless of other phenomena. In other words, it does not see each component as related to the other beings and phenomena it is surrounded by.

The analytical method is of importance in discovering facts about the universe, but it is incapable of a full discovery. The combination method can serve as its complementary.

Extreme applications of the combination method makes man cast doubt upon the most obvious of realities, and be left with a scattered collection of knowledge. Nowadays some people think that the analytical and combination methods belong to scientific domains and the combination and generalist approaches suit philosophy. We must keep in mind that the scientific method is not solely analytical, nor is the philosophical method entirely combination. A harmony between the two methods is what can provide man with accurate knowledge.

The analytical method is suitable for studying sets where the components have no interactive relation with each other. In other words, the analytical method is best when if by discovering each component, accurate knowledge is achieved. But when the components interact with each other and their combination results in a new phenomenon, the analytical method does not suffice. Merely mentioning that water consists of oxygen and hydrogen, or that salt is a combination of sodium and chlorine is not enough – merely identifying hydrogen and oxygen tells us nothing about the qualities and characteristics of water.

Knowledge gained by the analytical method, therefore, ignores the combinatory characteristics of the whole.

The problem with the analytical method is that having separated the whole and studying each component, the researcher considers each component as absolute. In other words,

The most serious harm the analytical method can do to knowledge is that by following this method, the thinker, having separated and analyzed the whole, a component becomes the absolute reality of his study, affecting everything else.

As an example, George Sarton believes that, "The history of science is one of the major parts of the spiritual history of human beings, and the other major parts are the history of art and religion." On the other hand, he has said that, "In order to account for man's progress, the history of science should be

the basis of the explanation." In fact, he is following an analytical method; therefore, he is considering the history of science, a mere part of the history of human evolution, as the absolutely basic part.

The Differences between Science and Philosophy

Some of the differences between science and philosophy are:

- 1– As Whitehead believes, "Philosophy searches for generalizations that determine the entire reality of the truth, without which no reality could escape being abstract. Science, on the other hand, creates abstraction, content with knowing only some basic aspects of the entire truth, just a relative part of it."
- 2– Science cannot provide us with absolute dominance over the universe; each scientist can discover only aspects of realities, whereas by means of philosophy one can dominate the knowledge of the whole universe.
- 3– Philosophical systems are more stable than scientific systems, for they are based upon principles and generalizations far beyond the interpretations that form science. Philosophy has many fixed principles, such as the existence of realities in the world outside the mind, movement in the universe, objects for objects' sake and objects for the self's sake, the reliance of variables on unchangeables, and the uniformism of the mind.
- 4– In philosophy, we can achieve a form of certainty mixed with some vagueness, but in science we cannot achieve any certainty because of the influence of factors like the tools of knowledge.

There are a great many subjects which science fails to discover, such as the final value of good and evil, or in general any phenomenon that has absolute value and cannot be measured like natural issues; issues like absolute reality, absolute nonexistence, etc are also among them."

Philosophy is putting all its efforts into finally solving problems that have existed since the earliest times. In other words, philosophy still endeavors to discover the truth about philosophical matter, absolute values, the relationship between man and the universe, and the extent of the mind's judgment in realities. Another part of philosophy tends to understand general principles including various scientific results.

Despite the disputes scientists and philosophers have, they need each other. Contemporary philosophers believe that science can help them by proving the preliminaries to some philosophical proofs, and also by providing new problems for philosophical analysis.

The philosopher knows things that the scientist can neither deny nor study on by means of scientific methods. However, the sometimes the scientist becomes concerned with the possible necessity of gaining such philosophical knowledge and their influence on scientific explanations or the foundations of those explanations.

For example, when a physicist discusses movement in physics or when a chemist studies interactive movements in chemistry, each have a certain concept of movement in his mind; likewise the philosopher attempts to perceive a kind of movement that involves everything. When the physicist or chemist assume that the meaning of movement according to the philosopher is vaster than what physics and chemistry (or experimental sciences, in general) offers, they may conclude that by taking the philosophical meaning of movement into consideration, they may both discover new meanings and even develop their approaches.

Science also explains various forms of physical matter with all their specific characteristics to us. The flow of human thought, however, does not stop at that; it attempts to discover the truth that can be the absolute matter in all external objects, and then come to a general relationship regarding movement. Thus, it is in such philosophical problems where science seems to be at the service of philosophy.

The philosopher knows quite well that science has discovered some of the realities and facts of the universe, and that scientific contact with facts – if accurate – is more reliable than the philosophical one, but purely scientific knowledge cannot bring us to the discovery of all components and levels of the universe. In other words, the mind may even playfully inhibit the progress of thoughts, so using science whenever possible is necessary. The philosopher should, however, keep in mind that his scientific contact with facts can only reveal to him some limited aspects of the facts, and he should never expect science to introduce him to all components and levels of the universe.

The Classification of Philosophy

Some philosophers have preferred a geographical classification:

- 1- Eastern philosophy
- 2- Western philosophy

They have then proceeded to point out a series of characteristics for each category, sometimes even making them conflict. Here are five points of difference between Western and Eastern philosophy:

- a) Eastern philosophy focuses on supernatural realities, but Western philosophy is more naturalistic, focusing on the physically observable.
- b) Eastern philosophy makes use of pure thought and reasoning when studying the facts and realities of the universe, whereas Western philosophy particularly since the Renaissance uses the senses and other technological devices.
- c) In order to discover general principles accounting for the universe, Eastern philosophy takes into consideration the post–experimental principles, whereas Western philosophy insists on using experimental methods.

- d) Unlike Eastern philosophy, Western philosophy tends to criticize and reconsider general philosophical fundamentals and principles of the past.
- e) Western philosophy emphasizes that when discussing man and the universe, "what there is" and "what there should be" be separated, but Eastern philosophy does not.

Such an approach and distinction between Western and Eastern philosophies is not acceptable. The issues thinkers and intellectuals face depends on the conditions and circumstances they are surrounded with, so any intellectual or thinker may come up with the same issues and problems as his peers when facing the same conditions. If the conditions make him feel it absolutely crucial to discuss time and movement, for example, any other intellectual or thinker would do the same feeling the necessity.

The important point is the intellectual's mind becoming engaged with the problem – if this happens the intellectual will start his work on it, whether belonging to Western or Eastern philosophy. Industrial advances, changes in social relationships and the rise of a new meaning of Epicurean freedom led to new issues in the West, the study of which even infiltrated their philosophy and created special philosophical principles and basics. If such phenomena had arisen in the East, however, the same would definitely have happened to Eastern philosophy, too.

The points of criticism on the characteristics of thought systems in Western and Eastern philosophies are:

- 1– The claim that Eastern philosophy focuses on non–physical facts and Western philosophy pays more attention to materialistic issues is not acceptable. Although Western philosophy did find some tendency toward naturalism thanks to Francis Bacon, many Western thinkers did not follow it. In the twentieth century, many Western thinkers focused on the supernatural, and their naturalistic tendencies never prevented this. Einstein, Planck, Bergson and Whitehead had a comprehensive approach to the issues about man, both natural and supernatural.
- 2– Stating that Eastern philosophy is based upon pure reasoning and intelligence and Western philosophy is founded on experimental methods shows how ignorant one can be toward the developments of thought systems in the West.

If the West has paid more attention to naturalism – which certainly follows experimental methods – throughout the recent centuries, it is due to the needs of those countries; if the East also felt the need to study the qualities and characteristics of vegetables and plants and physical and chemical phenomena, they would have used such methods too, rather than the *al-vahed* theory, which states that only a single, unique thing can arise from the nature of a single, unique thing. In the early stages of the development of Islamic culture, when Muslims paid a lot of attention to naturalism, experimental methods were put to frequent use.

Scientists like Zachariah Razi, Avicenna and Hassan ibn Heissam used laboratory devices in fields such

as chemistry, physics and medicine. Neither Islamic thinkers nor Western intellectuals, however, were ignorant toward the basic principles of philosophy, and the necessity of abstraction and mental generalization, for without them they could never have abstract natural laws from the order and harmony dominant over the universe.

- 3- Another point of criticism is the statement that Western philosophy shows little emphasis on general concepts and fundamentals, whereas Eastern philosophy searches for general laws that interpret the universe. Positivism which aimed to categorize sciences and give philosophy a positivist aspect failed in the West, and was criticized by many Western philosophers, who turned to non-experimental methods. No intellectual can defy a series of mental fundamentals and still believe in observable facts that cannot be analyzed without those fundamentals.
- 4– The claim that there is no criticism or reconsideration in Eastern philosophy, whereas Western philosophy criticizes and reconsiders the fundamental philosophies of the past quite often is not correct. All books on Eastern philosophy include a criticism of the thoughts and ideas presented before. Islamic thinkers and intellectuals have never been mere followers of their predecessors' thoughts.

For instance, though Farabi and Avicenna have accepted some of the philosophical ideas of Aristotle and Plato, they never completely followed them. In his book *Asfar*, Mollasadra has discussed and criticized many of the philosophical thoughts before him, and presented new ideas, too. If Eastern philosophy were truly obedient of prior thoughts, there would be no valuable works like Qazali's *Tahafat-ul-phalasefe* or Ibn Rushd's *Tahafat-ul-tahafat*.

We must remember, however, that philosophers have also sometimes turned to indirect criticism; in other words, they have criticized the thoughts of others alongside presenting their own ideas. Some of them have even interpreted the thoughts of other philosophers, for sometimes a thinker cannot properly word his own thoughts, but another intellectual may be able to correctly interpret them in a better way. This has been an important step toward eliminating the disputes between philosophers. Furthermore, respecting others' views is a highly significant principle in scientific and philosophical research; even in the West, there are both inconsiderate figures like Bertrand Russell and also quite morally well-adjusted ones like Whitehead and Planck.

5- It also incorrect to say that in Western philosophy there is much attention to making a distinction between "what there is" and "what there should be" when discussing mankind and the universe, whereas Eastern philosophy shows little emphasis on it.

First, we cannot make any separation between what exists and what there should exist concerning man, for human life is drowned in an ocean of "propers."

Second, such a distinction is merely an excuse for some people to make a negative approach toward morals and religion which are the basic factors of human development.

Third, we cannot speak of "what there should be" without discovering the existence of man and activating his positive potentials; this is what neither Western nor Eastern philosophy knows how to do.

The Advantages of the Collaboration between Science and Philosophy

The cooperation between science and philosophy can lead to the following advantages in favor of human knowledge:

- 1– Most scientists of experimental sciences believe that philosophers generalize, so they live in a world apart from the one scientists spend their time discovering; this is why scientists sometimes consider philosophers' work as worthless.
- 2– By means of his experimental information, the scientist tries to analyze unities; the philosopher, on the other hand, tends to achieve comprehensive unities. Cooperation between the two can lead to even more comprehensive unities in science.
- 3- Due to technological advances and changes in scientific aims, science is always changing; philosophical principles, on the other hand, are fixed, and provide the best tool for quenching man's mental desire for combining. The generalizations philosophy includes can save science from falling into a scattered mess, and prevent it from becoming trapped in its own technological devices.
- 4– By making contact with science, philosophy can study and reconsider some of its fundamentals and principles. For example, science can help revise the law of causality and its details, thus eliminating its vagueness.
- 5- Science has made amazing progress in discovering some parts of nature. If these advances are put to use on the path toward human unity which philosophy is responsible for man can make correct use of nature, and move from "what there is" to "what there should be." Science and philosophy should join ships to solve the problems of mankind. If the scientist and the philosopher are to have stronger cooperation, they should first acknowledge each other and then follow these principles:
- a) The scientist and the philosopher should both know that analyzing the components of nature for the purpose of scientific research does not damage their interrelation, for:

(Disturb one particle, and the harmony of the whole universe will be disturbed.)

b) Scientists should avoid statements like, "It's definitely this, and nothing else," for the universe is quite open, and man's limited senses and devices and internal ideals shouldn't let make such generalizations.

c) Scientists should accept the fact that there is a start and an end to the universe, even though science cannot verify them as observable physical phenomena. The scientist should not fall into such a superficial approach in which:

(We know nothing about the beginning and the end of this world; it seems that it is an ancient, great book whose first and last pages have been lost.)

d) The scientist should realize that his contact with facts is done through his senses and experimental devices, so he can never directly achieve contact with all the facts of the universe:

(O God, Who is aware of all obvious and hidden! Reveal everything in this deceitful world as it truly is.)

Jalal-addin Muhammad Molawi (Rumi)

e) The scientist should realize that unless he understands and acknowledges the existence of divine wisdom and philosophy in the universe, he cannot claim to have gained any – not even the slightest – knowledge of the universe, for his knowledge and sensory and mental activities are components of the universe themselves, and should be added to the components of nature. The wise human should say that:

(If only the universe could speak, and would thus reveal all its secrets, for all the theorizing, imagination, reasoning and contradicting made by man about the universe cannot possibly provide him with complete knowledge about the universe, for they are merely phenomena and parts of the universe.)

Jalal-addin Muhammad Molawi (Rumi)

f) The scientist and the philosopher should believe in God so that they can interpret the flow of natural laws and the movement in them.

Following the above principles can not only provide the grounds for science and philosophy to

cooperate, but also make them both work together on the path of wisdom. If science can help man discover one or many components of the world inside or outside, philosophy can show us the general principles dominant over the universe.

Wisdom and philosophy are able to make the human soul flourish. If science and philosophy were the two wings of a bird, wisdom would be its soul, which can take it from "what there is" to "what there should be." It is wisdom that provides man with the truly original feeling of being.

The Humanities

The humanities are the sciences concerned with man and various aspects and approaches related to him – that is why it is not limited to a particular field of science. Every science studies man from a certain point of view. Politics, for instance, involves the study of "man from the point of view of his management of social life in order to achieve the most desired goals," or economics concerns man from the viewpoint of his material life management and adjustment.

The humanities can be categorized into seven groups "according to their various aspects in relation to the central point of the study of man – the human character:"

- 1– The humanities that concern man's natural life, like biology, physiology, pathology, and man's relationship with his surroundings.
- 2- The humanities that relate to history, such as the natural history of man, the political history of man, etc.
- 3– The humanities related to economics, like work and its values, production and distribution, economic development, etc.
- 4- Those that are related to man's social life, like sociology, anthropology, management, politics, law, etc.
- 5- The humanities that pertain to man's evolutional "propers," like culture, civilizations, literature, aesthetics, art, etc.
- 6- The humanities that concern man's mental potentials and activities, like psychology, psychiatry and identifying faculties such as the memory, imagination, will, choice, genius and discovery.
- 7- The humanities that are related to values or virtues of individual or social evolution, like morals, religion and positive mysticism.

The above seven forms of the humanities should move on the path that can take the human character – the "self" – to perfection. The human character and its needs and potentials should always be the main factor in the humanities. Alas, it is not so nowadays, and the humanities have fallen into merely

considering phenomena; they study the effects – human behaviors – instead of the real truth. Today's humanities are obsessed with statistics instead of scientifically accurate discussions. Ignoring the human "self" and its pivotal role in human life has led to these effects:

- a) Important phenomena in man like emotions, thought, intelligence, and will have been studied without taking into consideration the influence of the "self" in managing them. Due to the neglect toward the human "self," some scholars of the humanities have even come to ignore issues like thought, intelligence, imagination, will and freedom of choice, and only study their resulting behaviors.
- b) Some great values that are innately planted inside man have been ignored, like religion, morals and mysticism. Thus, ignorance toward the "self" has caused little attention to be paid for it to flourish, which is brought about by moral values and the sense of duty; the final goal of the "self," being attracted by divinity, has been forgotten.
- c) Misinterpretation of free will flourishing freedom on the path to development and perfection is a result of studying free will without considering the "self's" dominance over the positive and negative poles. Ignoring the "self" leads to misinterpretations of free will, and also other effects like nihilism and alienation. In other words, man's advances in providing his own luxury, he will feel totally void. Ignoring the "self" arises from two factors: one is hedonism and selfishness, and the other is various thoughts and beliefs, among which the following are the ones that have caused the major deviations in the humanities:
- 1– Extreme naturalism: Man has never been moderate in his mental endeavors. Intellectuals both past and present have damaged evolutional flow of science. Due to their extreme naturalism, scientists and intellectuals have focused on analyzing physical phenomena and issues that are measurable, and pay little attention to the essence of life and the human "self."
- 2- The theory of the evolution of kinds, presented by scientists like Darwin, and Lemark which brought great harm to the greatness and sacred value of the human "self."
- 3– The theory of the originality of power, supported by intellectuals like Nietzsche. Although power is the primary condition for man's intelligible life in both domains of individual and social life, it must be the power with which each person respects the right for others to live too, not enslave them to his own advantage. People like Nietzsche have in fact interpreted themselves, not power and its usage.

Do these supporters of the essence of power mean to describe that up to now it has been the powerful who have controlled life, or are they commanding the powerful to do so?

They cannot be claiming to be describing the truth, for ignoring all the humanitarian deeds, the sacrifices human beings have made for each other, the resistances they have shown against atrocities and their struggle for freedom throughout history would mean ignoring the whole of history altogether! Thus, we must say that these supporters in fact express their own internal ideals and wishes, not a real historic

trend.

4– Freud's extremist theory concerning the sexual instinct also degraded the value of the human "self" and human moral virtues. Some of Freud's theories on various forms of sleep and his classifications of man's conscious (consciousness and unconsciousness) are considerably useful, but his negative approach toward man's qualities and mental greatness and also his misinterpretation of morals and religion deserve criticism; these theories caused a great deal of confusion and misjudgment among the simpleminded.

In brief, the humanities should move on the path of correctly interpreting the "self," and also respond to these six questions:

a) Who am I? b) Where have I come from? c) Where have I come to? d) Who am I with? e) Why have I come here? f) Where do I go from here?

The Necessary Aims of the Philosophy of Science

Other philosophers of science generally focus on the methodology of science, and are not concerned with issues like the duties of science and the scientist; there is, however, much more in the philosophy of science. Philosophers concerning science should take value–based issues into consideration, and determine the role of science in man's evolutional life. In other words, the philosophy of science should not ignore the relationship between science with man's life and the mission it has regarding human evolution.

If the philosophy of science is to move toward the development of human knowledge, it should undertake these duties:

1– The philosophy of science should express the necessity of the proportionate relationship between the cause and the claim.

Unfortunately, some scientists, particularly in the humanities, do not present suitable reasons for their claims, for example when an intellectual claims that "man is evil by nature" or "man is pure good by nature" merely by observing human behavior. If the scholars of the humanities expressed the reasons for their claims clearly and properly, man would never have to name the twentieth century 'The Century of Alienation from Himself and Others,' nor would he become a tooth of rigidly cold machinery with all the emotions, aesthetics and humanitarian tendencies he possesses.

2- The philosophy of science must take any measures necessary to avoid proving facts by means of statistics. Statistical proof and deduction in scientific theorems needs careful evaluation. Statistical studies can sometimes shows us an aspect of a phenomenon, but it should be never considered as a form of absolute discovery. Statistics cannot identify a phenomenon from various points of view.

- 3– The philosophy of science should make scientists realize that they should consider science like rays that first light up the insides of the scientists, then light up the whole society. In other words, the philosophy of science is to remind scientists that science consists of two values:
- a) Science is innately brightly illuminated, and can enlighten man up too, so it is innately valuable.
- b) It also has value as a means; it can be used on the path of human life, which can be quite suitable and advantageous, too.
- 4– The philosophy of science should reduce man's playfulness and pretension concerning cognitive factors, like his senses, laboratory tools and any device that can help man make contact with facts.
- 5- By discovering the relationship between various fields of science and presenting general viewpoints on ideologies, the philosophy of science can save researchers from being trapped in the vicious circles of their own fields, and make them seek the fundamental goals of life.

In other words, the philosophy of science should make researchers understand that although they may be experts in their own particular field, they may know little about the domains beyond it, especially the fundamentals and aim of life.

- 6- Though presenting methods of discovering facts in science is quite difficult, here is how the philosophy of science can help:
- a) Showing how to think correctly.
- b) Evaluating entirely theorems that are presented to researchers in form of theories.
- c) Freeing researchers from inadvertent reliance on predefined principles.
- 7- Determining the importance and criterion for preferring various branches of science to one another. The philosophy should prove that sciences are not equally important, and some may be preferred to others. The philosophy of science can identify the criterion by means of vast research and study. The criteria should be the intelligible life of human beings.
- 8– Research on the philosophical origins and basics of each branch of science and discovering their inter-relationships in order to discover the greater unity of sciences.
- 9- "Revising continually the principles and laws of science and nature and their corresponding tools," the primary factor of which is establishing a free relationship with the concerned principles and laws; in other words, accepting them should not be as sacred as believing in divine rules, so that man might feel free to put them to use at his wish.

The philosophy of science should on one hand provide the crucial necessity to constantly revise scientific laws and theories and on the other hand show acceptable, mental methods for the revision.

This does not mean, however, that there is no fixed scientific law; what it means is that there should be a modernist approach to various scientific principles if different aspects of issues are to be considered.

The point that is of high significance and calls for complete awareness and care is that even the mental aspects of science and knowledge – which are considered as unchangeably correct – need continual reconsideration; they must be exposed to the latest information and discoveries every day, as if we were discovering them again and again, for as we said, most scientific and industrial discoveries are caused by the modernist dynamism and mental endeavor of thinkers who thought the principles and laws of their times should have been revised.

The Philosophy of Science and the Humanities

Nowadays, the philosophy of science is focused mostly upon natural sciences rather than the humanities. The complexity of man's nature and identity makes it highly difficult for the philosophy of science to deal with. As we know, the humanities concern man, with all of his countless physical and spiritual aspects, which are further influenced by his will, decision, induction, imagination, wishes and ideals. Thus, we cannot easily establish a set of laws and principles for the philosophy of science to comment on their preliminaries, results, stability or variability.

If we fit man's physical, spiritual, mental and psychological talents and behaviors into rigid molds and frames, we will degrade man down to the domain of other living beings, or even machines. Furthermore, no science – not even philosophy – can be expected to be able to comment on man as it would about abstract mathematical topics. Mathematical activities are based upon quantity, whereas the humanities deal with qualitative issues and a series of realities. There are two factors that generally make the philosophy of science fail regarding the humanities:

- The difficulty of the identification of the laws and principles governing man's four relationships. Although a great deal of effort has been put into discovering humanity and human potentials and various aspects, he general knowledge and agreement on it is quite little, therefore the philosophy of science cannot successfully describe the fundamentals and methods of the humanities.
- The diverse, contradicting reactions man shows in response to different situations has also created complications for the philosophy of science making progress in the domain of the humanities. Man endeavors in many ways to fulfill his economic, legal and health needs, and since many of these needs are fixed, the humanities are able to describe basic economic needs and their consequences according to general laws and principles.

They can be studied from a philosophical point of view, but having fulfilled man's needs, it is impossible to foresee how the society will then be. We cannot predict, for example, after the fulfillment of the needs, whether people will definitely have a fine religion, culture, politics and moral ethics or not. In other words, when man's specific needs have been satisfied, his status regarding his four relationships – with God,

himself, the universe and others - cannot be defined.

Philosophical Doubt

Doubt implies the equality in the possibility of proving or denying a fact. Science, contrarily, is the undeniable discovery of facts. Doubt is naturally invariable, so philosophical doubt is not much different from other forms of doubt. When in doubt, the discoverer cannot discover the facts fully, for he feels himself in an obscured darkness. In other words, doubt can be described as a mixture of light and darkness. In primary ignorance, there is only darkness, whereas in doubt, there is some light. If man knows nothing at all, he will have no doubt, either. Doubt arises when there are both unknowns and certainties concerning a subject. We can categorize doubts into two groups:

- 1– Normal doubts, which arise from conflicts between reasons of the mind and those of sensory observations. It is the result of mistakes and lacks of knowledge man encounters in life, and has no solution except stronger scientific endeavor.
- 2– Doubts concerning divine issues and man's highest of uncertainties, like the supernatural. Such doubts cannot be resolved by thought and heading toward God is the only way to repel them.

Even in normal doubts, contact with God can relieve man of the psychological stress and suffering it may lead to. As Jalal-addin Muhammad Molawi (Rumi) says:

(If man desires spiritual and mental development, God will be his best guide through the darkness of life, creating a light in him that can be the criterion that can distinguish fake from genuine and right from wrong – in other words, certainty from doubt.)

It is necessary to have a criterion that can distinguish certainty from doubt. As Jalal-addin Muhammad Molawi believes, no matter how scientifically advanced man becomes, he will not be able to purify his soul completely of doubt. However, if he can relate his knowledge to divine knowledge, his doubts will not upset him anymore, for his soul will find a light that will serve as the criterion, providing him with serenity and accuracy.

No matter how accurate man's senses and tools may be, he will never be able to keep away from his doubts about his knowledge of the universe. Therefore, this doubt will always remain with him: what are the boundaries of his role as actor and spectator in the universe? However, if we can somehow make contact between the drop-sized knowledge we have to dive in the oceans of divine knowledge; then our doubts would no longer make us suffer.

The factors leading to doubt can be divided into two groups:

- a) Some believe that doubt arises from man's acts in discovering facts about the world. In ancient times, some people believed strongly in doubting, for they thought that errors of their senses influenced their judgment of facts. Now that man knows about sensory mistakes, this factor has been eliminated. The playfulness of the senses only leads to doubt in facts when we cannot guide their playfulness toward our observation's advantage; with technological advances now, we cannot consider our senses to play a crucial role in creating doubt any longer.
- b) Some others believe that since there are a few unknown things in the world, and all components of the universe are interrelated, philosophical doubts are inevitable.

There are shortcomings in this viewpoint, too. There are a great many facts that are clear to man without the least shadow of a doubt; furthermore, without accepting a series of unquestionable realities, human knowledge would never be able to exist. On the other hand, having doubt in some components does not conflict with belief in the whole system.

For instance, we may see a painting full of hundreds of lines, shapes and colors, and we are certain that the artist has had a definite subject in his mind to use them for; however, we may not be able to clearly understand all of them. If we believe in the overall harmony in the world of nature, our lack of knowledge about some phenomena and relationships do not contradict the whole system.

Doubts vary in subject and the degree of certainty in the units surrounding them. Here, we can divide doubts into deep and superficial kinds. If our knowledge of a subject we are doubtful of is superficial, our doubt about it will also be superficial. If we know a lot about it, however – that is, if there is more light on the subject – we will be in deep doubt. For instance, if we do not know much about whether "internal freedom is variable or not," we will have superficial doubt about it, but the more we know about internal freedom and change, the more dark points there will be, and the deeper our doubts will become.

The doubts thinkers and intellectuals have should not be considered to be the same in all cases, either. Bertrand Russell, for example, had a profound knowledge of logic, mathematics and Western philosophy, but he did not know Eastern philosophy, psychology, ethics and religion; his doubts on all of the mentioned topics cannot be regarded the same.

Doubt is a phenomenon essential to the progress of human culture and civilization. Doubt about formal knowledge, however, must be for the purpose of discovering newer facts and secrets, and it should not cause man to cast doubt on everything. If he does not intend to discover new knowledge, he may question the whole fundamentals of human thought patterns. This is no longer philosophical doubt; it is a mental illness. In facts, doubts should not be regarded as originally, innately desirable, but rather as a means to escape decadent, archaic knowledge, and make efforts to reach new facts. Some have referred to doubt as the "means to flee from rigid, fixed laws and principles."

Science and Philosophy in Intelligible Life

Some scientists and intellectuals have done research on whether realities like science, art, management and politics are virtually valuable or not. Some believe that science, art and politics are virtually desirable, whereas some others think that without mental endeavors on the path of human life, they would be worthless. The value of science and philosophy should be considered in connection with intelligible life.

Intelligible life is the life in which all of man's positive aspects are fulfilled, and as we know, one of the most fundamentals of positive human aspects is seeking the supreme aim of life, that can interpret and justify life intelligently and logically.

In natural life, science can intoxicate man and make power overcome righteousness.

Science can cast light upon one aspect of man, granting him the power to reveal facts. This kind of using this power is only possible in intelligible life. We know that gaining awareness of facts is one thing, and adjusting man's relationship with them is something totally different, as being aware of many issues concerning righteousness and justice is quite different from behaving righteously and justly toward others. In intelligible life, science never serves to inflate the natural self, promote arrogance and boastfulness or taking advantage of others.

In brief, science can be used in two different ways:

- 1- Discovering facts in order to adjust and moderate the four relationships:
- a) Man-God
- b) Man-himself
- c) Man-the universe
- d) Man-other human beings

This form of science is like a pure light shining onto man's nature. This science is pure light, created by God, the One who enlightens the whole universe. It is with this form of science that man can activate his abstract perfection and greatness (i.e., innate light) toward reality.

2- Understanding realities in order to reinforce man's desires, or inflating the natural self. When science is used in this way, man considers himself as the end and others as the means. In other words, he intends to dominate others. Such a science will lead to nothing but disaster and doom for man. It will alienate man from himself, which will make him also alienated from the universe and other human beings.

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