

## A Traditional Inquiry into the Nature of the Scientific Inquiry

A Revelation has begun to take hold within the popular mass consciousness that modern science deals, not with the physical world *per se* and not with an empirical methodology that relies strictly on experiment and observation within the physical world, but with various theories, hypotheses, and assumptions that may or may not embody certain aspects of the truth. Looking back on Newtonian physics, which is now described as classical and is disavowed at the top, we now perceive that for all its brilliant success over the centuries, it too is just a particular theory that has had its day and now defers to the marvels of quantum physics. The scientific *Weltanschauung* cultivated by scientists and cherished by modern sophisticates may now be lacking the one thing that modern science always proclaimed to be the measure of objectivity, namely empirical proof that its theories and conceptions are true.

The founding principle of classical Newtonian physics is that a real, objective world exists, a world that the scientist can understand in every minute detail. Quantum theory takes away this certainty, by asserting that scientists cannot hope to discover the “real” world in infinite detail, not because there is any limit to their intellectual ingenuity or technical expertise, nor even because there are laws of physics preventing the attainment of perfect knowledge. The basis of quantum theory is more revolutionary than that. It asserts that perfect objective knowledge of the world cannot be had because there is no objective world, at least according to the parameters of modern science. Similarly, a complicated architecture of theory and supposition has been constructed as a rationale to explain the

origin and evolution of life on earth. Yet paradoxically, not a single shred of evidence exists to explain the origin of life or the transformation of an evolving life from species to species culminating in the human consciousness. What, then, are the implications of a scientific paradigm of knowledge that seeks a truth that is beyond its reach? What is the nature of the scientific inquiry that has written a limit into the fabric of its knowledge, just as senescence is written into the very fabric of our being?

The mandate of modern science has, for simplicity's sake, been reduced to two fundamental concerns, both well known and perennial, that arise out of the very nature of the scientific inquiry. They concern the knowledge of human origins and the knowledge concerning the reality: Who is man and what is the true nature of reality? These questions are well known because nothing interests humanity more than the knowledge of his own self-identity and a knowledge of a "science," whether it be traditional, modern or otherwise, that explains the true nature of reality. They are perennial because no knowledge has universally convinced the broad spectrum of humanity with regard to its complete and total veracity. Because the fundamental mystery refuses to give up its mystique or its elemental secrets, a sense of certainty continues to elude modern man unless he resolves that certainty through faith in a body of beliefs.

Our third question is not well known for the want of asking and could not therefore be considered perennial: What is modern science and what is the nature of the scientific inquiry? Modern science questions, judges, and presides over the acquisition of knowledge concerning an objective reality, but is it ever questioned regarding its purpose and identity? The question *what is science?* is not well known because no one seems inclined to ask it or probe too deeply into its implied but unarticulated meaning; it is far from being considered perennial because the phenomenon of modern science has a relatively recent history of several centuries in comparison with the millennia of the traditional perspective and is rarely evoked by the masses to resolve their inner doubt and anxieties about the

nature and meaning of life. Nevertheless, modern science represents the predominant mode of thinking and remains the ultimate frame of reference for the modern era in terms of its coloration and ambiance. The modern scientific elite, who are the high priests of the modern world and who alone have power to speak *ex cathedra* on such questions as the nature of reality and the origin of mankind, have established the fundamental criteria through which modern man understands the nature of reality and the human beings who inhabit that reality. They alone have the right to form the fundamental interrogatives that make up the parameters of the scientific inquiry.

Over the centuries, indeed for millennia, both traditional scientists and contemporary layman have asked the question *who* and *what* with regard to man and the universe, with a view to answering the elusive *why*, for in addition to the *who* and the *what* of existence, traditional man was primarily interested in the *why* of existence. Meaning and purpose placed the fundamental mystery of the origins and ends of both man and the universe into a comprehensible perspective that resolved in a clear and practical manner the interrogative that lay at the heart of existence. Since the 17th century, however, and the rise of what has come to be known as modern science, scientists have prided themselves on asking not *why* things are the way they are, but primarily *how*. They are interested in the *what*, the *when*, the *where*, and above all the *how* of things in their purely spatial and temporal phenomenality. The question of *why* at best still concerns those who go beyond the study and investigation of the phenomenal world and are willing to partake of the perennial wisdom, while the question of *who* still concerns the vast majority of mankind that has never lost interest in their own identity, even if it means accepting the myth of simian ancestry that according to a modern science traces our parentage through the lineage of hominids to one of the great families of primates.

We raise our first two questions *who is man* and *what is the nature of reality* not to answer them, but merely to link them viscerally to our primary focus, namely our third question, namely *what is modern science?* As part of our inquiry into the

ambiance and “spirit” of the modern world, we are inclined to ask and pursue an answer to the question — not who or what precisely is man, whence his origin, whither his destination and what his ultimate end but — what is modern science, its foundations, its *raison d’être*, its avowed purpose, its framework, its *sine qua non*, and its ultimate objective, mandate and vision.

With reference to the specific fields of science such as physics, chemistry, biology, astronomy and the like, everyone has at least some idea of its area of interest. Systematic reference is made in the world media to microbiology, genetic engineering, and molecular chemistry, not to mention the now world famous quantum enigma of physics that has virtually become a household word by virtue of the quantum leap that is now incorporated into common speech. Most people are familiar through popular magazines and TV documentaries with the various fields of science, such as paleontology and zoology, while many have had first hand experience with modern psychology, sociology, and possibly anthropology. These are all branches of science whose mandate, parameters, and objectives are relatively straightforward and familiar to the average person. These nominal “branches” of knowledge are well understood to be the particularized study and research of a fragmentary and specialized field of interest whose findings, within the limits of its mandate and competence, have value and meaning that can be applied to the world of man without shaking the mental, psychic, and spiritual ground upon which he stands. Medicine as the study of healing and health is a prime case in point; vast achievements have been made in recent times beneficially affecting the health and well-being of millions of people the world over.

Meanwhile, over these individual and specialized fields of knowledge and their accomplishments hovers “modern science” as the great archangel of modern times whose wings encompass the horizon and whose breadth reaches the stars. It is always there in the background like a large and predatory beast, establishing the parameters of all the fields of scientific inquiry,

infiltrating and overwhelming their very flavor and ambiance, and generally creating a specter that projects the attitude, the overall approach, the basic philosophy, and ultimately the encompassing world-view of all the individual sciences of the modern world. All the individual sciences must conform to the mandate of the modern scientific outlook, which in turn is the product of the contemporary scientific elite.

Once again, we need to amplify our question with a number of related questions since it bears so much significance for the life and spirit of our time: What precisely is modern science, indeed what is the nature of its mandate that it denies and rejects everything that stands as an obstacle in its path? Is it a great living, breathing predatory beast that has established its turf by creating a universe within the world? Is it a new world paradigm that serves as the filter through which contemporary man can perceive and understand the world? Is it a supreme philosophy that provides the underlining doctrinal statement and the medium of approach to the avowed search for the true nature of reality? Is modern science an enterprise, an edifice, or a virtual architecture of knowledge and reason that provides the framework for human minds and the geometry for a surface understanding of the world? Is it a web of explanations, an unbroken discourse, a well-articulated thesis, a map of the "territory," or a prevailing world-view that makes inquiries, sets limits, and draws conclusions all within the scope of its own closed system? Is the fabric of scientific knowledge woven solely from the threads of the physicality of the world and on the loom of human reason? Is it a personage of great authority, a spokesman for the scientific doctrine of the physical nature of existence, a contemporary deity, or a satanic demon of the modern age?

We are at a crossroads and a turning point in the life of our time. Modern man cannot advance much further without coming to terms with the two great frameworks of knowledge, the one intellectual and the other spiritual, that are presently available to people today in order to place themselves and their world into a comprehensive and intelligible perspective. These

two universal paradigms of knowledge are presently on parallel tracks reflective of two paths, two alternatives, two frontiers if you will, the one a vision of traditional knowledge and the other the perception of a modern, scientific knowledge. One is the path of the cerebral mind; the other is the path of the “intelligent” heart. Both not only demand our attention with their claims of access to the inside story concerning the origin/end of man and the true nature of reality, but both also lay claim to the topography of the mind, will, heart, and spirit of man.

Are we to believe in the universal truths set forth in the traditional world-view of the major religions? Through the revelation of the Divine Speech, through the signs and symbols of Nature and through Man, the traditional world-view of the great world religions proclaims the existence of an Absolute and Supreme Being who is not only the Source, the Origin, and the Creator of the microcosmic and macrocosmic universes, but also the self-proclaimed *Lord of all the worlds*. The traditions also confirm the existence of a great hierarchy of being and of reality that accounts for a wide, indeed infinite range of beings from the gnat to man to the archangel. The Divine Being has established ordered levels of reality throughout the universe that range from the very lowest form of manifestation, namely the physical plane of existence, to the very highest levels of manifestation in pure spirit. “The traditional sciences of all traditional civilizations agree on certain principles of the utmost importance which need be reiterated in this age of forgetfulness of even the most obvious truths. These sciences are based on a hierarchic vision of the universe, one which sees the physical world as the lowest domain of reality which nevertheless reflects the higher states by means of symbols which have remained an ever open gate towards the invisible for that traditional humanity which had not as yet lost the ‘symbolist spirit.’ ”<sup>1</sup>

Are we to believe in the modern scientific world view and if so what is precisely that world-view? Through observation, investigation, and experimentation, modern science proclaims the existence of a natural world and by extension

presumably a natural cosmos which, in its self-proclaimed separation from the influence of a Supreme Being, is a world unto itself and a universe that is an independent reality of its own which can be studied and known in an ultimate sense, without any reference to a higher order of experience and without reference to a universal Creator. Space, time, matter, motion, and energy are the parameters of the physical world and thus are expressed realities, universals if you will, that are independent of any higher orders of being and cut off from the power and influence of a Divine Intelligence. It portrays a physical world, a mechanical world that is primarily the subject of mathematization and quantification; anything within nature that does not fall within that rubric and is in essence non-quantifiable is irrelevant to the study of modern science.

The Scientific Revolution that occurred during the Renaissance initiated and imposed a new form or paradigm that was based on the increasingly anthropo-centered and rationalistic thinking of that time. This new form of knowledge “resulted in a unilateral and monolithic science that has remained ever since that period bound to a single level of reality and closed to any possibility of access to higher states of being or levels of consciousness, a science which is profoundly terrestrial and ‘externalized’ even when attempting to deal with the farthest reaches of the heavens or depths of the human soul.”<sup>2</sup> It is a knowledge of the physical world that is based on ratiocination and empiricism, whereas tradition, as understood by contemporary masters of the perennial traditional doctrines, implies immutability, permanence, and a knowledge of a principial and metaphysical order of reality. In a manner of speaking, we have already answered our question *what is modern science*, and the answer is modern man, who, through observation, through investigation and through experimentation proclaims the existence of a natural, physical world order that is an independent reality of its own. In other words, modern man himself has created modern science in his own image, based on the powers of his mind and senses to perceive and establish the ultimate reality and define its true nature.

However, scientific man finds himself within the center of an unexpected inconsistency. He is paradoxically center-stage, both inquirer and the object of his inquiry, observer and the one observed, subject and object. This scientific perspective has become a man-centered<sup>3</sup> universe in the sense that man himself, through the sublime use of his faculty of reason, becomes the moderator, the medium, and the measure in coming to terms with the reality of the externalized world. He is the witness, the observer, and the criterion; he is the ultimate sensor and the final arbiter of what is real. However, he has paradoxically created a science which excludes the reality of man *qua* man from the general picture of the universe. Man as the great determinator with intuitive knowledge and creative mental powers has been determined out of existence by the prodigy of his own reasoning.

Within the scientific perspective, man does not have a soul, a definable human nature, or an enlightened human consciousness, all of which are well articulated and understood as fundamental in identifying who man is within the traditional perspective. Instead, man has a biology, a chemistry, a physics, and a history that is quantifiable and measurable, but he is not man as has been understood for millennia within the traditional perspective. The central paradox of modern science lies in the fact that the fruit of its knowledge has been initiated by soulless, reasoned-based humans who have been rendered inhuman by virtue of their lack of — and denial of — the spiritual qualities and potential of man. The traditional man of intellect, soul, and spirit, together with the spiritual man of ethical character, higher consciousness, and sacred sentiments, simply does not exist within this secular perspective. Modern man has created a science that depicts a universe in which man as abiding soul and enduring spirit has no place. He has created a science that characterizes Nature, the surrounding Universe, and the all-encompassing Cosmos as disconnected and independent of the human condition except through their physical presence within existence.



The traditional world-view, of which all the major world religions and in particular the religion of Islam concur, consider it as axiomatic that man is in essence a spiritual being whose nature and destiny can be fulfilled through the expression of his higher faculties such as his intellect, intelligence, and free will, through the expression of inner qualities and virtues such as patience, fortitude, and generosity, and through the expression of spiritual instincts such as the witnessing and surrender of the human will to the supreme Will of the Divinity, and through the expression of sacred sentiments such as fear, hope, and love that always accompany a higher consciousness of God. In other words, the essence of traditional man finds his fulfillment and self-realization through potentialities that lie far beyond anything that falls within the sphere of physical, biological, psychological, or sociological explanations of the origin and meaning of man found within the brief of modern-day science. From the spiritual point of view, man is a soul, a spirit, and a sacred character in the unfolding narrative of the Divine Story.

In the scientific world-view, man is regarded as a more or less autonomous entity within the universe. He exists, as it were, apart from God and apart from any kind of force that could be characterized as spiritual, other-worldly, or beatitudinal. He has not been created by God and he will not return to God, in contradiction to the simple yet eloquent Qur'anic verse *We come from God and to Him we shall return* (Al-Baqarah 2:152). He is thought of as being nothing more than an individual and finite creature that has his moment in time, and will eventually disappear back into the energy of the cosmos — nothing more. He enjoys a faculty called reason, a faculty that is most notably cut off from both Revelation and the Intellect which belongs to the supra-human level of reality, yet his reason somehow illuminates the human mind. Man's reason is closed to all that is above its own plane of operation, and therefore does not profit from forces that represent higher forms of knowledge and being. His reason is his god because it is regarded as the sole instrument that navigates through the sea of universal mystery; his reason is the final arbiter of what his knowledge brings forth. Anything that transcends the faculty of

human reason is treated quite simply as non-verifiable knowledge or worse, as the sub-product of an over-ripe and misguided imagination.<sup>4</sup>

As an arch materialist and rationalist, the modern scientist believes that life, consciousness, and self-awareness are nothing but manifestations of complex arrangements of inanimate particles, a faith which makes it perfectly rational for him to place exclusive reliance on the bodily senses, and to reject any interference from the answers situated in the heart. For him, in other words, higher levels of Reality simply do not exist, because his faith excludes the possibility of their existence.

Accusations have often been leveled against the world religions for anthropomorphizing the Divinity, creating a God that conforms to man's image. Alternatively, we could easily make accusations against science (if we were so inclined) for creating an anthropo-centered universe that is virtually created by man as arbiter, arch-determiner, and reasoned judge in the establishment of a world-view that attempts to synthesize the meaning of the universe into a reality that is earth-bound and three-dimensional.

Science seems to have taken a perverse satisfaction in dethroning mankind from the center of the cosmos. Galileo removed us from the eye of the solar system. Darwin denied us even our terrestrial domination by ignominiously linking our ancestry directly with the primate apes! But gradually, humanity has moved back center-stage during the modern era with the comforting principle that the knowledge of the universe somehow depends upon human measurements. Proud of the ability to measure, particularly during these times with the development of quantum theory and the rarefied micro-instruments with which physicists explore its varied possibilities, modern man comes to identify his measurements with reality itself. Profane science essentially builds upon measurements because they show the relationship between phenomena which may be accessible to observation, but it does not go near the essence of phenomena. This is why

profane science is more and more a prisoner of the necessity for quantitative verification.

Within the traditional Islamic perspective, man is not considered to have anthropomorphized the Divinity. On the contrary, the Divinity has suffused the Divine qualities and attributes into the creation of the human entity, making him human by virtue of his *Divine* qualities and portraying his physical and thus his “pictorial” form as being “in His image,” according to a well known *hadith* of the Prophet (SAW).<sup>5</sup> Within the traditional perspective, man has been fused with the qualities of God, rather than the Divinity having been anthropomorphized through an imaginative or psychological projection of the human mentality.

In addition, the Divinity has portrayed Himself throughout the Qur’an as more personable and accessible to His thinking creation by using a full range of personal pronouns — including I, We, You, He, My, Our, His, Your — rendering the Divine Being more personalized and approachable to the human mentality, in order that humans may comprehend concepts and realities that would otherwise be inaccessible and unfathomable to them, while portraying the Divine Being as more approachable and intimate. He is nearer to you than your jugular vein. It is not an anthropomorphic God that we witness in the Qur’anic revelation. The overwhelming impression is not of a humanized God, but rather a Supreme and All-Powerful Deity, remembering and recalling the Divine Names such as the One and Only One (*Al-Ahad*), the Unique and the Subtle (*Al-Latif*), the Reality and the Truth (*Al-Haqq*). The sacred formula of Islam, *there is no god but God (la ilaha illallah)*, is alternatively rendered as *there is no god but I, there is no god but You, there is no god but He*, in keeping with an overall projection of not an anthropomorphic but a personal God, in order to create a personalized and accessible feeling of nearness and intimacy that punctuates the Qur’anic imagery.

We do not read only of the Hand of God and of the Divine Countenance. The Divinity frequently refers to concepts that are further personalized through the use of unexpected

pronominal references. There is no doubt whose dominion it is when Allah (SWT) refers to My Heaven and My Earth, since it is certainly not man's Heaven and man's Earth. In addition, He speaks in the revelation of My Way (Al-Mumtahinah 60:1), My Plan (Al-Qalam 68:45), My Pleasure (Al-Mumtahinah 60:1), My Spirit (Saad 38:72), My Hands (Saad 38:75), and My Messengers (Al-Mujadilah 58:20). More immediate and perhaps more ominous are the personalized references to My Curse (Saad 38:78), My Cause (Aal Imran 3:195) My Warning (Al-Qamar 54:37) and My Wrath. And these are merely examples of the first person singular pronouns. The use of third person singular pronominal adjectives include references to His Spirit (58:22), His Light (Al-Saff 61:8), His Signs (Al-Jumu'ah 62:2), His Messenger (Al-Munafiqun 63:1), and His Path (Al-Qalam 68:7). Finally, the Divinity refers to Our Eyes (Al-Toor 52:48) and Our Presence (Al-Nisa 4:67).

The traditional perspective, drawing on the sources of knowledge within revelation and scripture, portrays not a man-centered universe but rather a Divinity that is Origin, Source, Center, and Final End of all creation. He is the Supreme Being if you will, but made more accessible and real by virtue of the pronominal aspects of His Being as revealed in scripture. Where does man stand within this pronominal perspective? What relates exclusively to him and becomes a part of his exclusive identity. Indeed, according to the Qur'an, there is nothing more personal and more intimate from the human point of view than human prayer, service, life, and death highlighted with the verse *my prayer, my service, my life and my death are for Allah, Lord of all the worlds* (Al-An'am 6:162).

The modern scientific perspective, though in a curious way anthropo-centered if not actually anthropomorphic in its orientation, is far from personalized and lacking any form of intimacy. Nothing could be farther removed from the bold, exclusivist, and progressive ambiance and spirit of modern science than the revealed doctrine of the Divine Intellect and the Holy Spirit of the Divinity, the I, the You, and the He of the Divine Revelation. The traditional sciences were never

considered purely utilitarian in the modern sense, and “sacred science” was never a science purely for the sake of science. Traditional science always maintained a window to eternity. Through the use of his faculty of reason alone and without the aid of his spiritual intelligence and his sacred intuition of things, which in the traditional perspective are actually faculties of objectification of the reality, modern man relies solely on the domain of his senses and his mind, thus declaring the primacy of discursive thought and sheer intellectual prowess over spiritual intuition. Through a science of his own creation, modern man attempts to face nature directly, without any intermediaries or veils such as symbols or revelation, that were the traditional go-betweens of man and the super-natural.

Traditional man did not face the mystery implicit within Nature and the Cosmos any more directly than he faced God directly or expected to see the face of the Divine Countenance (*Al-Wajh*). Traditional knowledge came indirectly through enlightened Messengers, through Revelation, through Nature, through symbols, and through human introspection (“Know thyself in order to know God.”) and not directly from the Divine Being to the human being. Traditional man’s understanding was synthetic, rather than analytic, based on a synthesis of the knowledge that was made available to him, not any knowledge but an essential knowledge that unifies and saves. God teaches man through Revelation and Nature and they, in turn, create a state in which a symbolic and analogical understanding of the world is possible. The relationship between Nature and traditional man was sympathetic and interactive rather than demanding and confrontational.

Islam emphasizes the concept of man as the *abd* as well as the *khalifah* of God, or God’s slave as well as God’s representative on earth. Man is *abdullah* or the slave of God because he is God’s creation, fashioned by His Hands, subject to His Commands, receptive to His Mercy, and animated by His Spirit. Again we rely on the pronominal adjectives, for he (man) is His and we are not Our (God). Man is *khalifatullah* or the vicegerent of the Divinity because he has the mind, the

intelligence, the free will, and the potential virtue to relate and interact harmoniously with the forces of Nature. The forces of nature are at his disposal to be used for the benefit of humanity and within the construct of the natural and Divine laws that cannot be violated without great cost.

He is microcosmic man or natural man in miniature. Forces that exist within him are reflected within the macrocosmic universe by virtue of the law and symmetry that issue from the divine command. The universe within man reflects the greater universe at large. He has the capacity to assimilate into his being the total scale of natural energies that are available within the universe in order to bring about the kind of “being” that he is supposed to be as reflected within the revelation. “Everything is definitively contained within our own soul, whose lower ramifications are identified with the domain of the sense, but whose root reaches to pure Being and the supreme Essence, so that man grasps within himself the axis of the cosmos.”<sup>6</sup>

As such, traditional man could measure the vertical dimension of the world, which is none other than the entire perspective of the Spirit and of the spirituality that lies sequestered within the boundaries of manifested form. Thus, in understanding this concept, he understood in a manner of speaking “all,”<sup>7</sup> while modern man attempts to measure the whole of the horizontal dimension, and in coming to know “all” may find that he understands nothing.

Modern science is matter-bound, while modern man dreams he has a faculty of reason that is transcendent. He strives to reduce the whole of the qualitative richness — the so-called vertical dimension — of this universe to a construct of matter and form. This construct is conceived as a variable grouping of minute particles identified through quantum mechanics as minuscule sub-atomic particles, defined as genuine bodies or simply as points of energy. This means that everything which constitutes the world for us, except of course space and time, have to be reduced, scientifically speaking, to a series of sub-atomic models that are definable in terms of number, mass,

trajectories, and specifications of the minute bodies concerned. In other words, to put it more simply and less scientifically, we have here firstly a reduction of quality to quantity, the qualitative aspects of life have been replaced in favor of a tighter and tighter mathematical definition of atomic structure. This is followed by a further reduction to the point where quantity itself becomes indeterminate.

Physics, the new physics in particular, is fundamentally concerned with what the universe is made of and how it works. As such, it explores the levels of matter down to the level at which particles become indeterminate. At the sub-atomic level, matter does not exist with any certainty at definite places, but rather shows “tendencies to occur.” Mathematical reflection is being replaced by statistical calculations and patterns of probability that are actually interconnections in an inseparable cosmic web. It seems as if we have the breakdown of the real world in which the theoretical approach of science leads down an avenue that eventually comes to particles so minute they become unreal. In this environment, classical concepts like the elementary particle, material substance, or isolated object have lost their original meaning. All particles can be changed into other particles; they can be created from energy and can vanish into energy. They actually lose their *raison d’être*, namely substantiation and become merely “idealizations” which are useful from a practical point of view but have no fundamental significance.

Is this a reality according to the organs of the senses, the gospel according to the human mind, the truth according to the high priests of science? According to the traditional perspective, knowledge of the universe must involve the human body as an agent of knowing, not by itself but in harmony with the intellect. “We have as a rule forgotten that there is an intelligence which is intuitive, direct and instantaneous in its operation, an intelligence which has no need for dialectic or discursive thought, but flies straight to the mark like an arrow; and much less do we realize that this high and forgotten faculty — which the ancients termed “intellect” — is operative and indeed plays

the essential role in the act of sense perception.”<sup>8</sup> We must involve the entire body and not just the faculty of human reason when it comes to meeting truth and reality head-on. Every aspect of the human body has powers that lead to a knowledge of the infinite, each aspect in its own right, each in its own way. The faculty of reason uses logic, sound reasoning, and common sense to arrive at certain conclusions within its particular expertise. But man is not just the expression of his reason.

The power of observation and the immediacy of the sensory experience related to that observation has constructed a kind of “wall of truth” that excludes the faculty of the intellect with its attendant perceptions of higher realities. From the point of view of modern science, beyond this wall of truth nothing exists and nothing is considered real unless it is tangible, measurable, and observable. Observational experiments can be conducted and believed in without the alleged deceptions and vague promises of a blind faith. Was modern science then born as a form of worship of the purely sensory experience? Did the fathers of the Scientific Revolution envision all the ideas about reality merely as generalizations related directly to sensory data? What precisely does modern science ask of us? Does it ask us to believe in a homogeneity of knowledge that results in the certain reduction of the qualitative aspects of nature to quantitative modalities? If so, then modern science asks us to sacrifice a good part of what is, according to the traditions, the reality of the universe, and offers us in exchange a mathematical schema whose major advantage is to help us manipulate matter on the plane of quantity, without often realizing the qualitative consequences that could have disastrous results for man and the world.

“In fact, the modern science of nature expressly limits itself to the corporeal domain alone, which it isolates from the total cosmos while considering things in their purely spatial and temporal phenomenality, as if supra-sensible reality with its differing levels was nothing at all and as if that reality were not knowable thanks to the intellect, in which it is analogically inherent in virtue of the correspondence between the macrocosm



and the microcosm.”<sup>9</sup> Does that mean that this was supposedly the body’s total contribution to knowledge? From the spiritual point of view, the human body serves as an instrument of knowledge that extends beyond the purely physical and does not merely reside within the realm of purely ordinary sensory experience or the use of reason. Science fails to grasp the possibility of more subtle and higher forms of inner sensation and experience beyond the gross materialism of the physical senses, through which the higher level truths of the traditional path can be verified.

Why does science ask so much, or perhaps so little, of us? If it proposes to narrow the scope of a universal knowledge to the ability of man’s reason to determine what is a valid experience through human senses, doesn’t this effectively eliminate all of the qualitative and spiritual richness of the universe, as well as the intangible universe within man? Is man all mind and matter, bereft of the influence of intelligence, intuition, soul, and spirit? It is not an easy question to answer, if it is at all answerable?

Perhaps one way to approach these question would be to mention and briefly examine the broad range of contemporary doctrines, theories, and systems of principle that science has produced in the form of -isms. We will focus here briefly on the two cornerstones of modern science, namely rationalism and empiricism, together with their logical by-products of materialism and secularism. Modern science is fundamentally based on rationalism with respect to man and empiricism with respect to the physical world. These four -isms actually form the philosophic foundation of modern science.

Rationalism<sup>10</sup> substantiates man’s position as pivot and center of the entire scientific enterprise, and justifies man’s position as the great determiner and final arbiter of what is real. Man’s reason makes this possible. Man’s reason is that faculty which is capable of logical analysis and classification of concepts on the one hand, and is capable of forming conclusions by means of analytical or analogical logic on the other hand. It specializes in all forms of logic, reasoning, and measurement

and is thus well-suited to the demands of modern science. Rationalism places all cognitive processes within the realm of the cerebral mind, to the exclusion of the intellect, which belongs to the supra-rational level of experience, according to the traditional perspective, and yet it illuminates the human mind with a knowledge that transcends the limitations of mind with its capacity to apprehend and experience metaphysical realities. Thus, the knowledge of the universe and its underlying reality must involve more than just the human mind as an agent of knowledge; that is why the traditions have always insisted upon the powerful faculty of the intellect to perceive the realities that transcend the purely physical plane of existence. Through the faculty of the intellect, according to the traditions, man has the means of perceiving the transcendent realities that lie above and beyond the plane of this world. Reason has the means of cognitive analysis and discursive thought and is limited to this world. Intellect and reason are different capabilities of the same intelligence, reason being concerned with the horizontal and the intellect being concerned with the vertical plane of existence.

While rationalism focuses on man's ability to think and reason, empiricism<sup>11</sup> focuses on man's ability to experience. Taken together, it is a frame of reference that permits man's mind to come to a scientific understanding about the nature of reality that is derived predominantly from sensory experience. As a philosophical doctrine, it acknowledges certain *a priori* truths such as the principles of mathematics and logic, and holds that all knowledge is derived from experience — either through the mind or the senses. Empiricism grounds itself within the field of pure matter, which is the stuff of its theories and principles. Old fashioned empiricists based their entire strategy on what they boldly called "objective" data, which meant of course data of purely material phenomena perceived by human senses. Through this objectification of matter, they would construct a theory of science that was based on inductive reasoning, moving outward and upward from the mass of details that had been witnessed toward a theory of knowledge that would express something about the true nature of reality. According to the dictates that followed the growth of

empiricism, scientific theories, hypotheses or explanations became statements which could be verified either with reference to empirical evidence and experiment, or at least could not be proven false in the absence of such evidence or experiment. Accordingly, absence of evidence was not considered necessarily as evidence of absence.

The interaction of rationalism and empiricism is really quite forceful and unique, providing two clearly articulated poles to the scientific perspective that in their complementarity have virtually become the foundation of modern science.<sup>12</sup> The first pole is the faculty of reason that actually formulates the scientific theories and hypotheses; the second is the objective world of phenomena that supplies the raw materials of evidence and experiment by virtue of which the scientific statements can be directly or indirectly checked. In addition, empiricism holds sway over rationalism; the senses rule the mind. The conclusions of reason may be declared invalid if they contradict the empirical evidence of sense-data, sense-impression, or any experiment carried out in relation to the phenomenal world. These are the prerequisites of scientific knowledge. Without the postulates of both rationalism and empiricism, there could be no knowledge as modern science understands the word. In other words, modern science has created a paradigm of knowledge and an analogous philosophic world-view that is radically dependent on information supplied through human observation of the phenomenal world and the ability of man's reason to process that knowledge into an understandable whole.

Beyond rationalism and empiricism, or rather because of these two quasi-philosophic approaches to the nature of reality, lies the ever-present materialism and secularism of the modern world. Materialism and secularism offer the modern world their irrefutable arguments of pleasure and freedom and leave us torn between two halves of a pseudo-truth that refuses to become a part of the Whole. It is small wonder that a scientific philosophy that offers us the mind in the form of rationalism and the senses in the form of empiricism should engender within the modern world the gross form of materialism and the profane form of

secularism we now witness everywhere. Out of the foundational roots of modern science has grown an all-pervasive materialism with respect to all manifestations of the physical and corporeal world and secularism with respect to how we perceive and comprehend ourselves and the world at large, creating thereby its very ambiance and “spirit.” They both amount to a deification of the material world in which matter rules the spirit and sense objects dominate the mind.

Materialism appeals to the senses and thus to man's basic desire to find satisfaction in possessions and in the forms of pleasure that the pursuit of materialism provides. It sets up virtually a doctrine that finds its basis in physical matter as the only reality. All thoughts, feelings, moods and inclinations are coordinates of the brain and therefore can be explained in terms of both matter and physical phenomena. As such, it projects a pseudo-philosophy of life suggesting that physical well-being and worldly possessions constitute not only the greatest good but the highest value in life. Materialism must be the logical conclusion of the purely rational mind. It focuses on objects, just as empiricism focuses on the senses as a measure of reality.

Secularism appeals to the modern mind by encouraging an anti-religious attitude among the modern day mass population that relieves them of the burden of a human responsibility that must accompany the religious point of view. In fact, secularism could effectively be described as the absence, indeed the abolition, of the sacred. “The process of secularization is a more or less conscious effort to cut all the lines of communication, to close all ways, to deny and ‘forget’ all light that leads to the source of truth. But secularization is more than a negative or a ‘forgetting’; it is also an attempt to institute an independent human existence, without superior justice, without judgment, without mercy or pardon.”<sup>13</sup> It rejects all articles of faith and all sacred doctrines that portray the reality of the world as a secret and a mystery that traditional man wished to revere and preserve rather than uncover and analyze. The traditional, spiritualist mentality that represents the opposite pole to the secularist mentality has no need to explain, manipulate, or even to fully

understand that mystery, at least not in any scientific manner, but rather it strives to know an essential knowledge that embraces the totality of life's experience. Materialism represents the total fascination with all things material to the extent that we proclaim the material world to be the objective reality. Secularism despiritualizes the universe with its mundane, indeed profane attitude of worldliness and temporality, totally draining away all of the spirituality within the mind or inclination of man and any sense of the sacred that resides within man as a subtle and veiled reality.

We could go on and elucidate at lengths not permitted here other prodigies of thought that have emerged over the years within the developing scientific world-view that seriously effect the way the mass contemporary population understand themselves and their immediate world. The theory of evolution, for example, is a case in point, bringing in its wake a wave of evolutionism that virtually dominates a wide spread of specialized sciences including biology, chemistry, paleontology, anthropology, chemistry and their related fields in the micro, molecular, genetic and cellular worlds.<sup>14</sup> "Darwinism is so powerful in its ability to array the isolated facts of biology into a coherent whole that few scientists have found reason to resist it. But one doesn't have to be a fundamentalist Christian to feel a sense of disbelief at the idea that something as complex as a human is the result of a chain of accidents stretching billions of years into the smoky past, that if a cosmic ray hadn't caused a point mutation in one of our evolutionary ancestors, we and all our inventions — our glorious architectures and imaginary spaces — might not be here at all."<sup>15</sup> In addition, there is a long list of peripheral -isms that continue to shroud the contemporary mentality within its anti-spiritual mindset, but that both intention and space do not permit us to further delve into here. They include such secular philosophies as nominalism, existentialism, relativism, subjectivism, progressivism, scientism, psychologism, reductionism, determinism and of course atheism, the arch-demon of our age, which is the logical conclusion of the mind without an open door to the blessed influences of the belief in God.

Have we come any nearer to a clear definition of our subject? Have we achieved any success at all in answering our question *what is modern science?* Has modern science identified itself, or is its constant state of flux, particularly during these fast-moving times, symptomatic of an underlying instability and insecurity at the heart of the modern world-view? It is by far a vast subject and one that cannot adequately be dealt with in a brief paper. Still, we have highlighted a number of elements, including its initial inception in history, its intellectual foundations, and its overwhelming influence on the mind and mentality of modern man. We have attempted to identify its philosophical hinterland, not by way of criticism but with a view to understanding its fundamental and essential premises. Modern man has benefited by its technological advances and the world has suffered excessively from its excesses and its misconceptions. Like everything in the world, it has two sides in its execution, the one beneficial, the other detrimental to both man and the world.

We have a right to know and perhaps it is our duty to explore the meaning of the messages of science. We need to evaluate the significance of the scientific dogma that we are confronted with in the light of a healthy skepticism before permitting our minds, our mentalities, and our very selves to be overwhelmed by its dogmatic, absolutist, and exclusive approach to defining the nature of man, of life, and of reality generally. In weaving a fabric of scientific knowledge, modern man may ultimately find this cloak of many colors not to his liking. When all inquiries have been laid aside and final judgment has been made concerning questions of man's origin, identity of self, and true nature of reality, modern man may find that he prefers the mystery and the faith of the spiritual traditions to raise him beyond the consciousness of the individual self, rather than the exactitude and logic of modern science that affirmatively denies the existence of the Higher Self.

### **Endnotes**

1. Nasr, S. H., *The Need for a Sacred Science* (Albany, NY: State University of New York Press, 1993) p. 97.

2. Ibid., p. 72.
3. “We are concerned then with the science whose objective pole does not extend beyond the psycho-physical complex of the natural world surrounding man and whose subjective pole does not transcend human reason, conceived in a purely anthropomorphic manner, and cut off completely from the light of the Intellect.”  
Ibid.
4. This is decidedly a “measured” view of modern man. There are some scientists who would like to reduce man to his lowest common denominator and render him not much more profound than a simple, well oiled machine. The biologist Richard Dawkins, who is a well know popularizer and aggressive proponent of "evolutionary tales", has suggested in his book *The Selfish Gene* that we can think of ourselves as “survival machines,” invented through evolutionary tinkering by ancient replicators, snippets of DNA. In speaking of “genes,” Dawkins has written: "Now they swarm in huge colonies safe inside gigantic lumbering robots, sealed off from the outside world, communicating with it by tortuous indirect routes, manipulating it by remote control They are in you and in me; they created us, body and mind; and their preservation is *the ultimate rationale for our existence.*"(Italics mine!)
5. We have discussed elsewhere the extensive use of anatomical symbols, including the Hand, the Face, and the Eyes of God as revealed in the Qur’an. These symbols were never understood literally by the faithful, who instinctively appreciated their symbolic quality, namely their suggestion of higher realities that lay behind the open face of the symbol. Problems with symbols such as these emerge only within the context of a science that *does* understand these images and symbols *literally*, in keeping with the scientific view that everything has a physical and thus literal dimension exclusive of a higher level of meaning.
6. Burckhardt, Titus., *Mirror of the Intellect* (Albany, NY: SUNY Press, 1987) p. 19.
7. It is not uncommon, particularly within the Islamic perspective, to rely on hyperbole to convey a meaning that might otherwise be inaccessible. The modern mentality, fused as it is with a predominantly scientific mindset, understands everything “literally” and does not aspire to a hyperbole that might convey a meaning that may compromise in any way the literal facts. When we write that traditional man measured the “vertical dimension,” we do not

mean that he could literally measure it, any more than when we write understand all, we mean that man can understand everything. Rather we mean that man can understand all that he should know in order to fulfill his function and purpose in this life, in other words, all that he needs to know.

8. Smith, Wolfgang., *The Quantum Enigma* (Peru, Ill.: Sherwood Sugden & Co., 1995) p. 15. This quote is all the more poignant and meaningful coming as it does from a well known scientist and mathematician who professes to be both interested and concerned by the distinction between scientific knowledge and scientific beliefs. His writings have attempted to unmask the often erroneous and deleterious conceptions that are widely accepted as scientific truths. His preface to the richly rewarding *Cosmos and Transcendence* begins thus (p. 9): “There is a sharp yet oft-overlooked distinction between scientific knowledge and scientific belief. And the difference is simple: authentic knowledge of a scientific kind refers necessarily to things that are observable in some specified sense, and affirms a verifiable truth; scientific belief, on the other hand, is distinguished precisely by the absence of these positivistic attributes. Thus, no matter what may be its ‘scientific status,’ the latter refers to entities that are not in truth observable, and affirms something that is in fact unverifiable.”
9. Needleman, Jacob., (ed.) *The Sword of Gnosis* (Baltimore, Md: Penguin Books Inc., 1974) p. 127.
10. Rationalism has appeared in some form in nearly every stage of Western philosophy, but it is primarily identified with the tradition stemming from the 17th-century French philosopher and scientist René Descartes. Descartes believed, among other things that geometry represented the ideal for all sciences and philosophy. He held that by means of reason alone, certain universal, self-evident truths could be discovered, from which the remaining content of philosophy and the sciences could be deductively derived. He assumed that these self-evident truths were innate, not derived from sense experience.
11. John Locke (1632–1704) was an English philosopher who is considered the founder of British empiricism. Locke’s two most important works, *Essay concerning Human Understanding* and *Two Treatises on Civil Government*, both published in 1690, quickly established him as the leading philosopher of freedom. In his *Essay*, he proposed that the mind was born a blank (*tabula rasa*) upon which all knowledge is inscribed in the form of human experience. He distinguished the primary qualities of things (e.g.,



extension, solidity, number) from the secondary qualities (e.g., color, smell, sound), which he held to be produced by the direct impact of the world on the sense organs. The primary qualities affect the sense organs mechanically, providing ideas that faithfully reflect reality. Thus science as we know it is made possible.

12. Modern traditional writers have little patience for this line of “reasoning.” “In other words, the foundations of modern science are false because, from the ‘subject’ point of view, it replaces Intellect and Revelation by reason and experiment, as if it were not contradictory to lay claim to totality on an empirical basis; and its foundations are false too because, from the ‘object’ point of view, it replaces the universal Substance by matter alone, either denying the universal Principle or reducing it to matter or to some kind of pseudo-absolute from which all transcendence has been eliminated.” Cf., Frithjof Schuon, “A Message” p. 14 in S.H. Nasr & Katherine O'Brien (eds.), *In Quest of the Sacred* (Oakton, Va: The Foundation for Traditional Studies, 1994) See also S. H. Nasr's *The Need for a Sacred Science* (Albany, NY: SUNY Press, 1993)
13. Lindborn, Tage., *The Tares and the Good Grain*, Tr. Alvin Moore Jr., (Lahore: Suhail Academy, 1988) p. 10.
14. The theory of evolution has extended its tentacles beyond the earth toward the stars to produce a kind of natural selection of the cosmos. Some scientists are suggesting that the universe can be understood as having constructed itself according to physical laws, by means of something  $\hat{u}$  no one knows what for sure  $\hat{u}$  operating in physics and cosmology just as natural selection does in biology; for example selecting laws that result in the kind of structure and complexity that is clearly a part of the cosmic framework.
15. Johnson, George., *Fire in the Mind* (New York: Vintage Books, 1995) p. 265.