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THE MUSLIM INTELLECT: TRIUMPH AND TRAGEDY

“Read in the name of thy Lord Who created.”

This first verse of the Qur’an, revealed some 1,400 years ago, announced the advent of Islam. The birth of Islam was a proclamation on continuation of the Abrahamic tradition. By the end of the Revelation that lasted for over two decades, the Qur’an came to contain nearly 800 instances of words and nuances associated with the archetype, knowledge (*al-ilm*).

Whether civilizations appear as a pursuit of profit or as an act of luxury is debatable in the face of Islamic civilization that once reflected the pinnacle of creativity: it was known as the *Civilization of the Book*. Out of the Arabian heartland, there emerged a culture that flourished from the Iberian Peninsula in the West to the Pacific Rim in the East. From the majestic minarets of the Blue Mosque in Istanbul through the winding bazaar of Timbuktu in Mali to the emerald-studded marble façade of Taj Mahal in India, there still is a sublime echo of a civilizational grandeur.

The early Muslim civilization, heir to a rich and diverse intellectual stock-Roman, Greek, Indian, and Persian - accomplished the unique synthesis of ideas in all branches of knowledge. From the 8th-13th century there were more religious, philosophical, medical, astronomical, historical, and geographical works written in Arabic than in any other human language of the period.

The creative Muslim impulse spread its liberating influence far and wide: It fueled the engine of the European Renaissance. Spain, the then Muslim land closest to mainland Europe, became the bedrock of large-scale knowledge transfer as opposed to today's controversial and shallow-by-content technology transfer.

The floodgates of knowledge unlocked in Muslim Spain left their lasting imprints on every conceivable domain of the Western society. Even the Christian Scholastic Theology was not immune to this cognitive seduction. Indeed, no palpable synthesis was possible without the 13th-century

rediscovery of Muslim Aristotelian scholarship, as exemplified by Ibn Sina (Avicenna) and Ibn Rushd (Averroes).

Ironically, coming on the eve of the Columbian triumph, Marilyn Waldman's summation on the Muslims in Spain in *The Christopher Columbus Encyclopedia* is instructive of the past glory: "Even in defeat, Muslim culture continued to exert its influence, as in Charles V's Renaissance palace in the Alhambra and the cathedral in the middle of the Great Mosque at Cordoba, Muslim culture, as absorbed by Spanish Christians, also indirectly influenced the New World in the form of family honor codes, home design and the plateresque style of architecture. Romance and Spanish have been filled with Arabic loanwords be they chemical, culinary, agricultural, technological, social or scientific. Muslims introduced new crops such as sugar cane, rice, cotton, and a number of fruits. Their wind-tower technology still heats and cools some Spanish homes and their irrigation technologies still water some Spanish fields".

Perhaps the most eloquent modern narrative on the Muslim heritage is offered not by an Orientalist or a Western scholar but a leading corporate woman just two weeks after the September 11 incident. Excerpts from the speech of Ms Carly Fiorina, then Chief Executive Officer of the multinational giant Hewlett Packard, amply demonstrate how classical, medieval and pre-modern Muslim civilization offered inspiring models of global leadership even in a world burdened by the growing monstrosity of Islam phobia:

. "There was once a civilization that was the greatest in the world."

It was able to create a continental super-state that stretched from ocean to ocean and from northern climes to tropics and deserts. Within its dominion lived hundreds of millions of people of different creeds and ethnic origins.

One of its languages became the universal language of much of the world, the bridge between the peoples of a hundred lands. Its armies were made up of people of many nationalities and its military protection allowed a degree of peace and prosperity that had never been known. The reach of this civilization's commerce extended from Latin America to China and everywhere in between.

And this civilization was driven more than anything, by invention. Its architects designed buildings that defied gravity. Its mathematicians created the algebra and algorithms that would enable the building of computers, and the creation of encryption. Its doctors examined the human body, and found new cures for disease. Its astronomers looked into the heavens, named the stars, and paved the way for space travel and exploration.

Its writers created thousands of stories. Stories of courage, romance and magic. Its poets wrote of love, when others before them were too steeped in fear to think of such things. When other nations were afraid of ideas, this civilization thrived on them, and kept them alive. When censors threatened to wipe out knowledge from past civilizations, this civilization kept the knowledge alive and passed it on to others.

While modern Western civilization shares many of these traits, the civilization I'm talking about was the Islamic world from the year 800 to 1600 which included the Ottoman Empire and the courts of Baghdad, Damascus and Cairo and enlightened rulers like Suleiman the Magnificent.

Although we are often unaware of our indebtedness to this other civilization, its gifts are very much apart of our heritage. The technology industry would not exist without the contributions of Arab mathematicians. Sufi poet-philosophers like Rumi challenged our notions of self and truth. Leaders like Suleiman contributed to our notions of tolerance and civic leadership.

And perhaps we can learn a lesson from his example: It was leadership based on meritocracy, not inheritance. It was leadership that harnessed the full capabilities of a very diverse population—that included Christianity, Islamic, and Jewish traditions.

This kind of enlightened leadership — leadership that nurtured culture, sustainability, diversity and courage — led to 800 years of invention and prosperity”.

Today the Muslim civilization stands at a cross-road, bereft of its identity and vision.

As Muslims we do not have theologically sound understanding of our faith. Even the early discourse on speculative theology (*kalam*) is absent from our circles. We are engulfed in seemingly endless wars of rhetoric and anger among ourselves and against the West. Orthodoxy has won over reason. Rationalism, skepticism and individualism have been mercilessly sacrificed at the altar of a totalitarian Puritanism. We are suffocating due to the loss of pluralism and progressive thought so distinctive a trait of the Muslim past.

The rhetoric of moderation by Muslims has done little to stem the spread of intolerance, extremism, militancy, and violence among themselves and beyond. In Pakistan, for instance, the so-called” Enlightened moderation" has been obscured by the specter of suicide terrorism - something unknown in this land of ours even during the Soviet-Afghan war that was won by the CIA-financed Taliban, and then known as Mujahideen.

Elsewhere in the Muslim world bigotry and prejudice thrive as never before. Under Muslim rule today religious minorities live a life of fear and suspicion. In Malaysia for example, demolition of Hindu temples and shrines; the ban on the use of the word Allah by Christians in the Malay-language Bible; interdictions on proselytization; and the forced "rehabilitation" of apostates are among some of the sweeping norms of the Muslim fervor.

The Arab world fares no better. While sharing many of the above traits with their co-religionists, Jordan and Egypt actively prosecute converts from Islam as is the case with the revolutionary Islamic Republic of Iran. Some recent reports indicate that the prevailing atmosphere of extremism in the Arab world is forcing Christians to emigrate in large numbers from their Arab motherland. Not to mention the fact that "Muslim anti-Semitism" - an oxymoron in its own historical context (because Arabs are Semites) is touching new heights.

In an apt portrayal of the closing of the Muslim mind, Ameer Ali argues that the high rate of illiteracy in the Muslim world and centuries of indoctrination by the orthodox have crippled the ability to rationalize issues. One of the basic objectives of modern education is to develop a critical mind that could approach and analyze problems with rationality and come out with possible and practical solutions. The questions how and why rather than who, what, and when are the bedrock of critical thinking. Whereas the second set of questions demand the brain to function as a mere repository of information, only the first set makes the brain inquire and analyze the information that it receives. The system of education that developed in the Islamic madrasas for over 800 years worked brilliantly to answer the first set of questions but failed miserably to answer the second. This is why the classical innovative Islamic scholarship and the spirit of Muslim inquiry stagnated and lost their brilliance after the thirteenth century. The seminal works of ibn Khaldun in the fourteenth century should be considered as an exception to this stagnation

Beyond the alleged malediction of the madrassa is the much larger affliction that has crippled the Muslim intellect. Seemingly unable to redeem even the nuance of its past glory, it has sought convenient refuge in phobic isolationism, apologetics, and literalism. The Western intellectual corpora have for the first time put Muslims on the defensive. They are no longer members of the innovators league; instead they are the wholesome imitators and consumers of knowledge and technique with the attendant cultural artifacts.

The Muslim struggle for political independence from the colonial masters is a story of countless triumphs. However, the impetus provided by a large group of Muslim thinkers such as Syed Ahmad Khan, Allama Muhammad

Iqbal, Malek Bennabi, Jamaluddin Afghani, Rashid Rida, Muhammad Abduh, Syed Mawdudi, Dr. Muhammad Rafi-ud-Din, Allama Mashriqi, Dr. Ali Shariati, Dr. Israr Ahmad and many others set the stage for a diversity of opinions and reactions on Western modernity and its institutions.

The intellectual spectrum evolving since the beginning of the post-colonial period is that of inducement to modern learning or its rejection due to its own value burden. There are nevertheless hybrid areas where adoption or rejection seems to have gone astray. This has created an enormous intellectual wilderness with serious epistemological flaws. It is precisely in this parched landscape that apologetics, literalism, and nostalgic isolationism have mushroomed.

Drawing sustenance from these regressive mindsets of all the disciplines science, for its visible social and economic empowerment, has become an easy and immediate target of the literalists. It is no wonder that science and religion war is in full swing across the Muslim world albeit with a different posture as compared to the long-standing tradition of such debates in the Christendom.

The dilemma of modernity is nowhere more pronounced than in the Muslim perception and assimilation of modern science and technology. While the self-absorbed theocracy deems it fit to exploit the instruments of modernity in the furtherance of its own agenda, at the same time it does not consider it unethical to condemn the sources of modernity in the most virulent terms.

On the other hand, Muslim intellectual response toward a constructive engagement of religion and science remains largely an uncharted and undefined territory. The state of debate on religion and science in the Muslim world is that of a blurred intellectual vision. It is largely an articulation of a viewpoint that betrays the paucity of knowledge and thought about the modern scientific ethos. Together, it perpetuates an ossified style of theological reasoning. Others take it from an extreme apologetic perspective to the point of turning the Qur'an into a book of pure astronomy, biology, chemistry, mathematics or physics. Much of it is promoted as Islamic education, with a ring of authority where critical thinking is made to be a forbidden tree.

Then there is the poorly articulated and epistemologically weak idea of "Islamic science" that randomly makes use of a few common Islamic concepts and values in a rhetoric borrowed from the Western social radicalism - without ever reaching an analytical depth.

Against the backdrop of these feeble intellectual currents lurks the traditionalist discourse that altogether consigns modern science to oblivion

and attempts to prop up a fatal mix of mystical and alchemical knowledge. That too in the name of Islamic science. Much of the historical discourse on the subject remains panegyric in nature, to the extent of self-delusion. The agenda though adhered to by only a minority partially thrives on this nostalgic-thread.

This vast intellectual and to some extent doctrinal, confusion about the theory and practice of science, as well as the attending theological ramifications, calls for a radical change in attitudes and practices towards both religion and science. In our understanding, this change in attitudes and practices must occur at two levels: (i) epistemic - pedagogy in science following a free inquiry model rather than regurgitating the received text or being a mindless imitator, and (ii) cultural - the innovative mind is encouraged to develop positive interfaces between science and religion toward a greater harmony in knowledge.

We are neither interested in a scientific apology for the Qur'an nor in the relegation of science to a Quranic literalism because both tend to obfuscate the advance of knowledge in the respective domains. Contrarily, we need a dynamic invocation that may play a pivotal role in breaking the impasse that continues to grip Muslim mind and culture.

The Muslim experience of modernity has produced a healthy crop of apologists who come in all shapes and forms. Perhaps two centuries are not enough to shed the vestiges of nostalgia that Muslims in general carry with them. The power of the West has instilled a fear for which nostalgic indulgence seems to offer a convenient escape route. The most visible and deceptively gratifying approach is to seek "scientific" answers in the Quran.

The Quranic literalism has mushroomed over the last four or so decades. In modern times it all started with the publication of a book by a French medical doctor Maurice Bucaille who marshaled the argument that the Quranic account of the "scientific" discoveries is far more accurate than that of other holy scriptures. He set the textual criticism in an ontological perspective and tried to argue that the Quran foretold what science was discovering today.

Bucaille became an instant celebrity throughout the Muslim world. He seemed to have hit just the right chord in a milieu rife with all shades of apologia: Astronaut Neil Armstrong was rumored to have heard the Muslim call to prayer (*adhan*) as he landed on the moon. Nobody ever questioned the scientific basis of such an event!

On the contrary, at least two Muslim states officially sponsored international conferences to investigate the "scientific miracles" of the Quran. A permanent institution is now actively engaged in this line of research.

The literalist approach to the Quran covers a vast number of scientific disciplines from embryology to geology. We now are told that the speed of light can be directly calculated from the Quran and that one can harvest spiritual energy simply by controlling the spirits (*jinn*). Another pastime is to indulge into the “mathematical miracle” of the Quran. An Egyptian computer expert Rashad Khalifah who later made a claim to prophet hood and was murdered under mysterious circumstances in Tucson, Arizona, made lopsided arguments that the figure of 19 is the key to the understanding of the Quran. According to Khalifah, scientific discoveries lie hidden in different permutations of the figure 19 and all one needs is a high-speed computer-aided numerological analysis of the Quran to unravel that knowledge.

Another celebrity of the apologist hall of fame is the Canadian embryologist, Keith Moore, whose “scientific” study of the human embryological sequence in the Quran has won him a place in some text books on the subject. It is true that the Quran mentions a certain sequence of human reproduction from conception to full fetal growth. However, one makes such literal interpretations of the sacred text *vis-à-vis* the biological reality at the risk of intellectual peril.

For all measures, biology has both structural and functional levels. It is unclear at what level one can make a safe and valid interpolation.

Quranic literalism is a fallacy. The apologetic zeal wants to “prove” the truth of the Quran by invoking the scientific methodology. In its second chapter the Quran makes a statement of self-truth proclaiming it to be a Book in which there is nodoubt. Therefore, it runs contrary to the fundamental premise of Islamic epistemology to argue that Quran is in need of a validation of its truth claim by scientific methods. That makes belief subservient to the human agency, denying the divine role in imparting knowledge. At the same time it negates the organic unity of all knowledge.

Anyone familiar with the basics of scientific methodology would be in the know that the method has its own nemesis. It is ever-changing and the interpretation always requiring a fresh validation. That makes the scientific methodology bound to a spatio-temporal frame of reference. This procedural flaw does not apply to the sacred text. Its pronouncement has a seal of authenticity and finality though subject to differing interpretations.

If one is to accept the newly discovered equivalences between the sacred text and the scientific account then what one is supposed to make of the sacred text once the scientific ground shifts and new interpretations are in vogue?

The unilateral quest for scientific authentication and validation of the sacred text is totally oblivious of the implications for belief once the results

fall short of a self-fulfilling prophecy. Perhaps it is safe to recognize that the phenomenological statements in the sacred text are simply normative in essence and not amenable to transient human perception.

The environmental movement in the West is generally credited with the rise of social accountability of science and the end of its heroic image. Among others coming under influence from these currents the coinage “Islamic science” entered the modern debate. Seyyed Hossein Nasr is a deserving protagonist of this new mode of thought. His achievement lies in creating a scholastic frame of reference to initiate a discourse on the interfaces between science and Islam. His prolific writings on the subject constitute the groundwork for a modern philosophical and historical interpretation of science in Muslim society. This is a far cry from the nostalgia and apologia that have characterized much of the discourse.

A few writers including some neophytes have attempted to present Islamic science as a panacea for the ills of the Muslim community. Their approach is either to take a cursory look at the history of science in Islam and condemn the Western science for its alleged destruction of the Muslim societies or to transplant a few isolated concepts from the *Shariah* onto the working models of science. Both suffer from intellectual thinness. While one reduces Islamic science to an insular, passive and xenophobic mode the other makes a mockery of the genuine Muslim scholarship in shoddy journalistic parlance.

While the religious establishment has not known educational innovation for a longtime, the intellectuals are engaged in an imaginary discourse that has little bearing on Islamic theory of knowledge or socioeconomic utility of knowledge. If the present status quo in Muslim philosophy is any yardstick then there is an urgent need to initiate a valid and authentic discourse on science and Islam is one of the major intellectual challenges of our times.

The relevance of science and religion discourse for Islam can easily be discerned through the rise and fall of knowledge across the Muslim historical spectrum. Some comfort may be derived in realizing the organic unity of all knowledge. But that is the point from where emerges a real challenge to the Muslim intellect.

To invoke false pride in comparing the status of knowledge with other societies where modernity or secularism poses its peculiar problems is a failure of both perception and judgment.

The Muslim fall from grace is a civilizational issue. The multiple causes for the fall can neither be reduced to classical or neocolonialism nor to

someone's political whims. It is self-deceptive to mock the West while making arrogant claims about the absence of dichotomy of knowledge in Islam. In any search for the reasons of the fall therefore the issue of science and religion remains highly significant.

Beyond Nasr's fundamental contribution in giving a face to "Islamic Science" the subject continues to beg for a definition. A half-baked attempt at "Islamization" of knowledge has shown that by merely putting a prefix to the titles of disciplines –Islamic Astronomy, Islamic Biology, Islamic Economics – no scholarly purpose is served.

According to Ameer Ali, "The Islamization enterprise criticized both the ultra-secularization of knowledge in the West and the stifling of individual critical thought in the traditional system of Muslim education. The West was criticized for elevating "doubt and conjecture to the 'scientific' rank in methodology and (for) regard (ing) doubt as an eminently valid epistemological tool in the pursuit of truth.

The visionary objective of this movement was to remove the artificial dichotomy created by the orthodoxy between the mundane and the spiritual, to treat knowledge as a holistic unity, and to bring back that intellectual environment which made Islam the torchbearer of civilization during the European Dark Ages."

However, the effervescent epistemological revisionism in the garb of "Islamization of knowledge" has fallen into the trap of an allegedly value-free science. They thought it sufficient to add an adjective to some disciplinary categories and that summed up the Islamization endeavor.

Taking a cue from the idea that knowledge is not value-free and is generated within the framework of an ideology, the Islamization seeks to infuse, nay rather reinvent modern knowledge with a top layer of Islamic values.

A critical look at the Islamization methodology exposes its flaws. It appears to be having many similarities with the creation/evolution debate or the uproar on intelligent design. One fails to find answers as to how the Islamic values would be integrated within the body of knowledge; how those same values would affect the processes of knowing; and finally, how this newly packaged knowledge would share its common heritage with knowledge generated outside the Islamic framework?

The confusion about the status of knowledge is one of the critical issues in science and religion discourse in the Islamic context. Literalism, apologia, Islamization, and the recently vulgarized version of "Islamic science" are but

offshoots of an obscurantism that continues to plague the evolution of Muslim intellect.

Notwithstanding the economic and political obstacles to the advancement of knowledge in the Muslim world, there is a serious epistemological stagnation caused by an explosive mix of apologia and personal political agendas.

The paradigm of *Tawhid* as the *raison d'être* for Islamic epistemology and the Prophetic Tradition are no impediment to knowledge in Islam. On the contrary, they offer a matrix around which free inquiry is not only encouraged but made obligatory as a matter of belief. The task before the Muslim intellectual therefore is not to engage in futile debates with the West but to map out a strategy to exploit the unified knowledge.

Let us be reminded that the discourse on the nature and the functions of human knowledge has remained both intrinsically and extrinsically, subject to a constant restructuring. In every civilization invariably it has flourished under the sway of a dominant worldview. In the West, a transition from a geocentric to a heliocentric cosmos and lately to the quantum-based cosmology, illustrates the point. Although, in the eyes of some modern physicists the Unified Field Theory might have solved the conundrum of the universe yet the Superstrings Theory is posing a bold new defiance, among other contenders in new cosmology.

The complexities of particle physics may be defining the farthest edge of human knowledge. However, more mysterious and inscrutable than the visible universe is the intricately woven tissue we call the brain. In the words of Francis Crick: "There is no scientific study more vital to man than the study of his own brain. Our entire view of the universe depends on it".

In a wider sense, away from the traditional philosophical considerations and Cartesian dualism, the cognitive sciences represent a concerted enquiry towards an understanding of brain processes in knowledge acquisition and representation. According to Michel Imbert: "The cognitive sciences come to grips with the most important question relating to human nature: for example, they investigate the bases of our perceptual knowledge, the origin of mathematical and geometrical ideas, the expression of thought through language and the intellectual heritage with which the newborn child comes into the world. Breaking with the previous philosophical or psychological tradition however, the cognitive sciences approach these questions scientifically and no longer in a purely speculative manner. Conceptual and experimental tools exist for this purpose which enable us to subdivide the set of problems relating to human nature into simpler more distinct questions that

can be dealt with scientifically; it is thus possible to verify empirically the ideas set forth about a large number of 'mental' phenomena”.

Of necessity, the legendary order of academic disciplines is disappearing and gradually paving the way for the sciences of complexity. For instance, Shobini Rao has identified constituent fields of cognitive science as:

Enquiry into (a) the structure, content and process of cognition (cognitive psychology); (b) the nature of cognition (philosophy of mind); (c) the predominant process of cognitive manifestation or language (linguistics and psycholinguistics); (d) the anatomical and physiological bases of cognition (neuropsychology); (e) simulation and modeling of cognition (artificial intelligence); and (f) the anatomical basis of language (neurolinguistics).

The unification of academic disciplines towards the sciences of complexity typifies the beginning of a holistic approach -something that has been missing for long from the corpus of Western knowledge. In consonance with Imbert and discarding the long-held polarity of brain and mind, Boris Lomov argues that though genetic factors do not bear a direct relation to the content of knowledge yet these seem to influence "formal dynamic characteristics of brain processes connected with cognition."

Rejecting the neurophysiological reductionism, he suggests that: “to understand the mechanism of cognition it is necessary to investigate the interaction of the organism as a whole with the environment which is reflected in the brain. Thus, the problem of mind-brain is transformed into one of mind-body”.

The intellectual transmutation, that is discernible through a multi-disciplinary cross-section, is the "prime mover" for a major shift in epistemological orientation. Already, there is talk of blending the findings of brain science with philosophy -the genesis of a new discipline: Neurophilosophy. More than anything else, the complexity in the contents of human knowledge and its restructuring is a direct result of information-based technological revolution. The striking developments in recent decades of new information technologies have changed and profoundly embellished our ideas of the mind and the brain. In fact, our perception of reality is being altered through a capacious use of these technologies.

Moreover, the tools and concepts such as, super computers, artificial intelligence, knowledge engineering, fuzzy logic, neural networks, deductive databases cloud algorithms, expert systems and knowledge representation are casting a new epistemological perspective. In spite of that, the triangle - data, information, knowledge - may not hold true for we know that no single component of the triangle is an equivalent of, or a substitute for the other. In

other words information may or may not impart knowledge as data may not always convey information.

There appears to be a relationship between physical basis of perception and sensory information. From both neuropsychological and neurophysiological viewpoints, the distinction between information and knowledge appears to corroborate his general observations.

It is interesting to note that one of the greatest scholars and the first Muslim commentator on Aristotle, Abu Nasr al-Farabi (258-339/870-950) had expressed similar ideas.

According to al-Farabi, human mind is *tabula rasa*; sensory information is the source of ideas. The sensations experienced are not forgotten and the process by which the past sensory experiences are revived is the process of imagination (*al-mutakhayyilah*). The power which enables us to combine and divide images is the cogitative (*al-mufakkarah*) and the power to recall a past experience is called memory (*al-hafizah az-zahirah*).

Even the basic lexical meanings of "information" necessitate that a differentiation be made between information and knowledge. Understandably, this is one of the issues of epistemological concern and gains a much greater importance when studying the relevance of information and knowledge for the Muslim world.

It may be argued that neither knowledge nor information need to be pertinent to qualify for this designation since expressions like "useless information" and "useless knowledge" would indicate that usefulness is not a criterion for definition of the either one.

On the contrary, the classification of social value of knowledge by Imam al-Ghazali (450-505/1058-1111) among others into three areas as *Mahmud* (praiseworthy), *Madhmum* (blameworthy), and *Mubah* (permissible) is an important reminder that Muslim epistemological discourse should not ignore the social relevance of knowledge. In other words, it encompasses a value framework that is responsible for the generation of knowledge in the first instance. This applies both in letter and spirit to the generation of information as well since information, no matter how it is defined plays a definite role in the gradual build-up of a body of knowledge.

Any culturally biased characteristics of information notwithstanding, information, where it conveys the meaning of being told, is a process; whereas knowledge as it connotes knowing would be regarded as a state. That knowing occurs through, what Michael Polanyi describes as, 'tacit' channels excludes

the role of information as a process leading to the state of knowledge. Moreover, human thought processes preclude information *per se* in the generation of new knowledge. In fact, the inevitable relationship between information and knowledge should form the core of the Muslim epistemological search for new meanings in the 'informatized' society. No longer should the simple duality of *al-'ulum an-naqaliyyah* and *al-'ulum al-'aqliyyah*— so favorite with the oft nostalgic authors like Seyyed Hossein Nasr— suffice for the purpose of evolving a Muslim perspective on information and knowledge.

A Muslim discourse on the subject would remain incomplete without establishing a conceptual mold that incorporates the nature and characteristics of information, value-orientation of information and its transformation (or otherwise) into knowledge. We emphasize it because the new information technologies are at the heart of changing our concept of information and therefore, likely to have a lasting impact on the way knowledge is conceived, generated, disseminated and utilized.

In the post-genomic era dominated by cognitive neurosciences forming the bedrock of evolutionary epistemology, concepts like Islamic science or the Islamization of knowledge are signs of infantile intellect. They not only prevent us from gaining an insight into the dynamics of modern knowledge but deprive us of its evolving contents.

In spite of the prevailing despondency, there is hope. This radiant hope lies in the enduring message of none other than Iqbal. Abdolkarim Soroush, one of the most influential thinkers of post-revolutionary Iran, in conversation with Leezenberg, argues that: "One of the things I like in Iqbal is his emphasis on free will. I would like to suggest that free will has been a suppressed entity in both Islamic philosophy and Islamic mysticism. The Sufis are determinists, even fatalists: they see human beings as toys in the hands of God who cannot control themselves. In Islamic philosophy, the law of causality is so powerful that it too corners free will. Free will is part and parcel of the Enlightenment and of modernity. In Iqbal you see it maybe for the first time in Islam. In his magnum opus *The Reconstruction of Religious Thought in Islam* he proposes to reintroduce the idea of free will and an open future and through this, he comes to a new conception of God and of religious interpretation".

Iqbal's idea of free will equated with *khudi* and taken as a substratum for evolutionary epistemology is already making inroads into the modern Muslim scholarship. Dr. Muhammad Rafi-ud Din undoubtedly the greatest Iqbal scholar was an ardent proponent of Iqbal's philosophy. In a landmark doctoral

dissertation, Muhammad Shafiq Ajami recounts his services in the advancement of Muslim thought as do his own two seminal works.

Moreover, one of the eminent students of Iqbal, Dr. Israr Ahmad made remarkable interpretations of his philosophy with a unique blend of Quranic teachings and modern knowledge. His short treatise on the origins and evolution makes him a man way ahead of his times. Perhaps his work could serve as a precursor for an Islamic cosmology in congruence with the emerging thought as exemplified by biocentrism and biosemiotics.

The professed claim of Western science is that of doubt. Yet, the tyranny of the scientific method ossifies the same doubt into a "faith" or a truth-claim. The postmodernist rejection of truth as an Enlightenment value goes beyond that and equates it with a power claim. Conversely, faith constitutes the genesis of quest for knowledge in Islam.

In the words of Naquib al-'Attas, this proposition carries a ring of certainty: "Belief has cognitive content; and one of the main points of divergence between true religion and secular philosophy and science is the way in which the sources and methods of knowledge are understood".

This statement has profound implications for Islamic science for it identifies three major epistemic categories. First, it brings belief into the cognitive domain as opposed to scientific liberalism which makes the repudiation of belief a prerequisite to the discourse. Second, in searching for its source, it is neither reductionist nor determinist. Instead, it accords due recognition to the "nature of phenomena" and "empirical reality". Last, it settles for a method which is an extension of Islamic metaphysics by stating that "knowledge is limitless because the objects of knowledge are without limit".

In essence, the challenge of post-scientific society is that of reasserting a spiritual identity. Cultural relativism and plurality as vindicated by postmodernism put an even higher premium on soul searching by Muslims. The answer lies not in holding fast to the paling phantom of scientific fundamentalism but carving new cognitive niches without losing touch with substantive knowledge.

Readings and Notes

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