
SCIENTIA SACRA: A HOLISTIC EDUCATIONAL APPROACH FOR TRANSFORMING ENVIRONMENTAL CONSCIOUSNESS

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ABSTRACT

This research studies the educational approach to the environmental crisis called *Scientia Sacra* which was developed by Seyyed Hossein Nasr, a perennial and a contemporary Islamic philosopher. The paper aims to understand the background and underpinnings of this philosophy. It will discuss Nasr's critique of modernism as the root cause of our environmental crisis, and the manner in which he sees an educational approach informed by the concept of *scientia sacra* as the solution. The researcher also discusses various critiques of Nasr's approach and challenges in its application to education. It will investigate whether *scientia sacra* can contribute to solutions to the environmental crisis which can operate across religious and secular divides.

Keywords: Seyyed Hossein Nasr, *scientia sacra*, perennial philosophy, environmental crisis

Introduction

The environmental crisis we are experiencing is nothing new. It has been in preparation for a long time. Not only with the advance of industrialization but with the consciousness which developed along with this industrialization. Today this crisis is not just affecting isolated area but is affecting our entire planet. Forty-five years since the Declaration on Human Environment in 1972, various cultural traditions and religions of the world offered solutions to the environmental crisis. However, the world is still in crisis. Significant change cannot take place until we change our environmental consciousness through education. In this research paper, the researcher studies the perennial philosophical perspective of Seyyed Hossein Nasr and his concept of *scientia sacra* as an approach towards environmental crisis.

Today it is fashionable to consider the development of a holistic consciousness as a solution to environmental problems. Nasr's approach is important because it provides a version of holism which can be acceptable by the various religious traditions and by those who are secular as well. The researcher wishes to show that we need to approach environmental problems, with a new approach to education which provides a balance between science and the sacred understanding of the world developed by our religious traditions. The main focus will be Nasr's concept of *scientia sacra* as a way of achieving this balance. It will also examine how this concept can be integrated into the STEM educational system in the current time?

The study of Islamic environmental ethics can be traced to a contemporary Islamic philosopher, Seyyed Hossein Nasr, a University professor of Islamic Studies at George Washington University. Along with his understanding of the natural sciences, he approached the problems of environmental crisis from a metaphysical perspective. He was influenced by the tradition of Perennial philosophy, beginning with Rene Guenon and extending to the works of Frithjof Schuon, Titus Burckhardt, Marco Pallis, Martin Lings, Ananda K. Coomaraswamy and other traditionalists. During 1957-58, Nasr's embraced the Sufi tradition both intellectually

and spiritually and this led to the major philosophical themes he would continue to develop through his life. He would also apply this approach informed by Sufism and Perennial Philosophy to the environmental crisis. In 1966, Nasr delivered his series of lectures at the University of Chicago under the title of *The Encounter of Man and Nature*. These lectures were later compiled and edited by Nasr into a book entitled *Man and Nature - The Spiritual Crisis of Modern Man* (1968). This book caught the attention of Western scholars as it dealt with the philosophical and spiritual roots and predicted the coming of the environmental crisis. Nasr published several books in the following years, *Knowledge and Sacred* (1989), *The Need for a Sacred Science* (1993), *Religion and the Order of Nature* (1996). His writings voiced his deep concern that the causes of environmental destruction are rooted in a lack of a spiritual dimension.

...perhaps not all realize that in order to gain this peace with nature there must be peace with the spiritual order. To be at peace with the Earth one must be at peace with Heaven.¹

Nasr argues against the absolute authority of science and laments that philosophy has become a reflection of science. He demonstrates the limitations of science that lacks metaphysical knowledge, and states that a *scientia sacra* alone can harmonize the various degrees of reality and science.² In order to solve environmental problems, man must view the existing sciences and arts through the perspectives of religious traditions which have connected nature, human and the Absolute since ancient times.

Thus we can see that Nasr's approach to environmental ethics differs from Western environmental ethics. He emphasizes the need for a paradigm shift at a metaphysical and religious level; a change in our worldview and our way of life. He asks the Promethean man to also become a Pontifical man living life according to the Will of God and function as a vicegerent and protector of the earth. Nasr's critique of modernity and secularism is a shared concern among the perennialist school like his predecessors Guénon, Coomaraswamy and Schuon. Nasr affirms that each tradition

has a wealth of knowledge and by resuscitating this knowledge, it can allow religions and science to enrich one another and cooperate to heal the wounds inflicted on nature by our materialistic world.

But to understand the potential of this relationship between *scientia sacra* and science we need to go back to the philosophers who influenced Nasr's philosophy e.g. Avicenna, Suhrawardi, and Ibn Arabi and Frithjof Schuon. It will allow us to understand Nasr's essential concepts including Tradition, *tawhid* (principle of Unity) and *scientia sacra* and the critical resistance to such an approach from the side of religion and from science. The paper will conclude by considering the attempts at combining this Tawhidic principle with the STEM education system.

The Philosophers Who Influenced Nasr's Philosophy

Among the philosophers in the Islamic tradition who influenced Nasr, we need to single out 'Ibn 'Arabi. The importance of Ibn 'Arabi is in his formulation of the doctrines of Sufism and the promulgation of the esoteric (*Shariah*) dimension of Islam emphasizing the concept of the transcendent unity of Being (*wahdat al-wujud*) and the Universal Man (*al-insan al-kamil*).

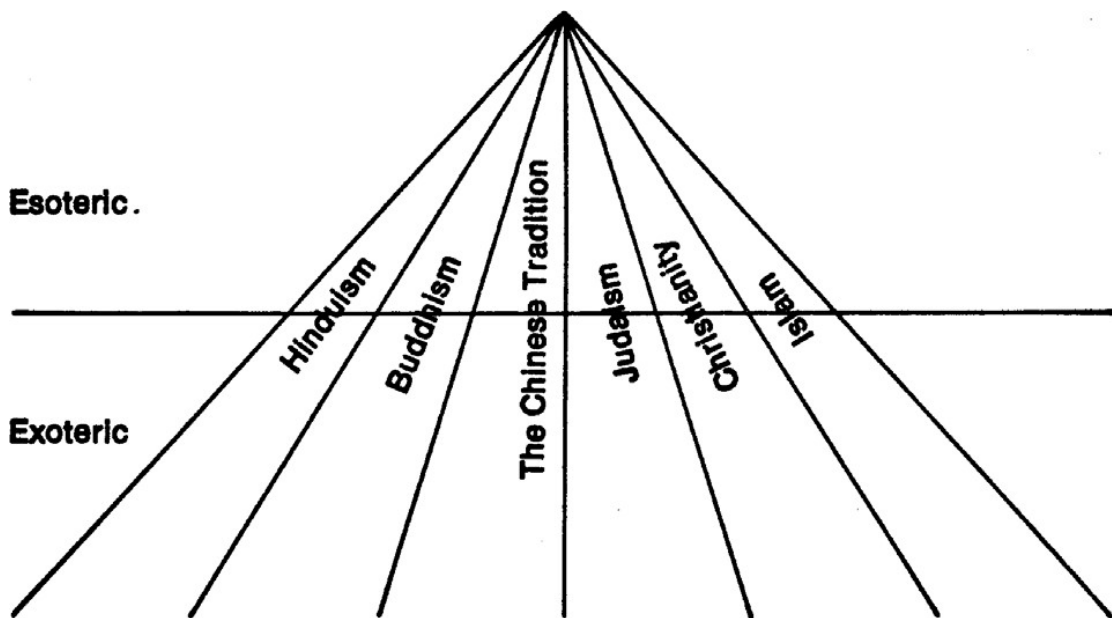
This recognition of the transcendent unity also needs to be accompanied by the development of knowledge. Ibn 'Arabi's view of knowledge occurs through various states of contemplation along the Sufi Path. Nasr explains that this knowledge (*gnosis*) is in the form of vision of reality. The language in his writings thus is in the form of symbol with its hidden meaning that means every exterior (*zahir*) must have an interior (*batin*). This is a process of *ta'wil* or of spiritual hermeneutics.

The concept of the transcendent unity of Being (*wahdat al-wujud*) although often criticized was adopted and further elaborated in Nasr's philosophy. Nasr clarifies that God is absolutely transcendent with respect to the Universe but the Universe is not completely separated from Him. The world and the things in it are not God but their reality belongs to God.

His very infinitude implies not a one sided transcendence but equally His being 'with' His creation; note that His is nearer to man than is man's jugular vein.³

We find that Nasr closely follows Ibn 'Arabi in his approach towards metaphysics and natural sciences.

Nasr's philosophy has been inspired by the traditionalists especially Frithjof Schuon (1907-98). In order to understand the perennialist perspective, we attempt to understand Schuon's concept of the Transcendent Unity of Religions. The central theme means that all traditional religions are expressions of one absolute Reality. Beyond the diversity and multiplicity of religions, there is a transcendent unity which is one eternal and unchanging or perennial Truth which may be found at the heart of all religions. This is shown in the diagram below:⁴



Huston Smith explains the Schuon's concept of the esoteric and exoteric in the *Transcendent Unity of Religions*:

The fundamental distinction is not between religions; it is not, so to speak, a line that, reappearing divides religion's great historical manifestations vertically, Hindus from Buddhists from Christians from Muslims, and so on. The dividing line is horizontal and occurs but once, cutting across the historical religions. Above the line lies esoterism, below it exoterism... For Schuon existence is graded and with it cognition as well. Metaphysically, in God at the apex, religions (or rather the revealed religions, a distinction to which we shall return) converge~ below they differ. The epistemological concomitant of this metaphysical fact is that religious discernment too, unites at its apex while dividing below it.⁵

Nasr explains further that:

Religion possesses at once an external, outward, or exoteric dimension concerned with the external and formal aspect of human life, but, because it is religion, it is in itself sufficient to enable man who follows its tenets and has faith in its truths to lead a fully human life and to gain salvation. Religion also possesses an inner or esoteric dimension concerned with the formless and essential with means to enable man to reach the Supernal Essence here and now. Moreover, within the context of this most general division, there are further levels within both the exoteric and the esoteric, so that altogether there exists within every integral religion a hierarchy of levels from the most outward to the most inward, which is the Supreme Center.⁶

At this point, we observe that Nasr accepted Schuon's theory and later drew from both the Islamic and perennial doctrines to formulate his own concept of *scientia sacra*.

Nasr's Critiques on Modern Science as The Cause of Environmental Crisis

René Guénon and Fritjof Schuon of perennial philosophy were a major influence on Nasr's approach. They recognized a loss of tradition and a loss of the appreciation of the sacred for the destructive way we regard nature. For Nasr too, a distorted instrumental approach to modern science leads to global calamity and the danger of nuclear warfare.

In *Man and Nature*, Nasr stated that:

The 'domination of nature' by man has caused the problems of over-population, the lack of breathing space, the congestion of city life, the exhaustion of natural resources of all kinds, the destruction of natural beauty, the marring of the living environment by means of the machine and its products, the abnormal rise in mental illnesses... Man wants to dominate not only for economic motives but also for a 'mystique' which is a direct residue of a one-time spiritual relation vis-à-vis nature."⁷

In the history of Islamic thought we find an integration of diverse fields of knowledge through the perspective of Islam. There was a synthesis of Western and Eastern traditions spanning the sciences, the arts, and metaphysics. Nasr attempts to recover this synthesis in his book "*Man and Nature - The Spiritual Crisis of Modern Man*" (1968). Nasr is not opposed to science itself but to its philosophical claims that drive it to exceed its legitimate boundaries. The world under the influence of modern science since the 16th century has been an advanced yet barbaric society. Modern science departed from metaphysics and philosophy, and claimed itself as the sole standard and measure of reality. Traditional knowledge and primordial religions became regarded as superstitious, outdated and unreliable. There was a shift from an appreciation of the sacred notion of nature to a profane and secularized framework which quantified all things. For Nasr, this crisis of modern science has led to global calamity and the possibility of nuclear warfare. His attack on modern sciences focuses

on its claim to the sole measure of reality.

Ibrahim Kalin's analysis of Nasr's view on science, distinguishes five features of modern science: first, the secular view of the universe excluding the Divine; second, the mechanization of the world; third, the emphasis on rationalism and empiricism; fourth, the impact of Cartesian dualism in the separation between subject and object; and lastly, modern science as a source of power and domination.⁸

In *Man and Nature - The Spiritual Crisis of Modern Man*, Nasr described that,

....with the gradual increase in decadence of the Greek Olympian religion, more and more the substance of nature became divorced from its spiritual significance, and cosmology and physics tended toward naturalism and empiricism. Then with the birth of Aristotle, philosophy as understood in the West began and as understood in the East terminated.⁹

Kalin further concluded that,

What came into being with the scientific revolution was a new way of looking at the world in the deepest sense of the term. Nature was no longer considered as a being of sacred significance with its own lifecycle and unity not to be destroyed by man's desire to establish a fake paradise here on earth.The historic breakaway from the religious view of the universe marks the incubation of modern secularism that claims to account for all the dimensions of nature by reducing it to pure quantity and a soulless machine. For Nasr, this secular view of the universe underlies the most essential characteristics of modern science.¹⁰

Nasr's Essential Concepts of Tradition, *Tawhid* and *scientia sacra*

Now we turn to Nasr's approach in responding to the causes of environmental crisis. Nasr presents his solutions at the metaphysical level starting from understanding the Tradition, *tawhid* and *scientia sacra*.

Tradition

Nasr's concerns for the destruction of nature and sacred could be compared to Ibn 'Arabi's concerns for the loss of esoterism in the Islamic tradition. Both defended the spirituality of the tradition. Following the view of perennial philosophy, Nasr shows that all traditions are the manifestations of the Primordial Tradition in the world the same as all religions are related to the Logos or the Word which was the beginning and is the aspect of the Universal Logos. Nasr says that

The school of the *philosophia perennis* speaks of tradition and traditions. It believes that there is a Primordial Tradition which constituted original or archetypal man's primal spiritual and intellectual heritage received through direct revelation when Heaven and earth were still "united." This Primordial Tradition is reflected in all later traditions, but the later traditions are not simply its historical and horizontal continuation. Each tradition is marked by a fresh vertical descent from the Origin.... But because the Origin is One and also because of the profound unity of the human recipient, despite important existing racial, ethnic, and cultural differences, the fact that there is both the Primordial Tradition and traditions does not destroy the perennity and universality of the *philosophia perennis*....¹¹

Nasr claims that in this Primordial Tradition, the sacred is able to shine through each minor tradition. and determine what is real or unreal. A sacred object represents the Eternal in the physical reality. The Sacred or the Eternal is the source of each tradition and what is traditional is inseparable from the sacred. Nasr shows us that in Islamic tradition, the Sacred is the center of all knowledge as well as all creation.

Tawhid

According to Murata & Chittick (1994), the roots (*asl*) of the Islamic knowledge are prescribed by the three principles as *tawhid*, prophecy (*nubuwwa*) and eschatology or the Return (*ma'ad*). The word *tawhid* is derived from the same root as the word *wahid* which means 'one'. Tawhid is concerned primarily with God, the angels and the measuring out. It is explained that,

God is the foundation and beginning of everything Islamic. The angels are the creatures nearest to God in the cosmic hierarchy, and they play a central role in God's interrelationship with human beings. The 'measuring out, both its good and its evil' refers to how God interacts with creation. To each thing, God measures out a certain limited amount of good and negative consequence of exactly the same act, a certain amount of evil. Unlimited good belongs to God alone, and limited good is inseparable from a touch of evil.¹²

In Islamic philosophy, the principle of Unity (*tawhid*) describes the relationship of the Sacred and creation, it manifests the interrelationship of all things and the Absolute. It explains that there is no divinity but God (*La ilaha illaLlah*). This principle means both unity and integration. It also implies the act and process of integration, of bringing into unity. Thus the term *tawhid* has several levels of meaning in Arabic. According to Nasr, in the Islamic perspective, integration means to achieve *tawhid*, to become adorned with a quality which belongs to God. Thus man can never achieve complete unity unless we realize that ultimately we are nothing and God is everything. It is through *fana* or the awareness of our nothingness before God that the Sufis believe we can achieve that supreme unity. Here the Islamic approach to environment considers that all creation and all knowledge is integrated by the principle of unity. As long as people observe the way of unity, this will bring peace and harmony to the world.

So through the concept of *tawhid*, we can understand the nature of man. The Islamic conception of man is summarized in the doctrine of *al-insan al-kamil*, the universal or perfect man. Nasr describes that this is manifested in the second part of *Shahadah* of Islam, ‘the witness,’ *Muhammadun rasul Allah*, Muhammad is the Messenger of God. The Universal Man which refers to Muhammad is the archetype of both the cosmos and man. Here we read the words of Rumi reflecting on how spiritual man outwardly dominated by nature but inwardly rule over things.

From the pure star-bright souls replenishment is ever coming to the stars of heaven. Outwardly we ruled by these stars, but our inward nature has become the ruler of the skies. Therefore, while in form thou art the microcosm, in reality thou art the macrocosm. Externally, the branch is the origin of the fruit; intrinsically the branch came into existence for the sake of the fruit.¹³

Nasr further elaborates that this cosmic dimension of man though means of the idea of the ‘natural man.’ Man, in the Islamic context, is in his primordial nature (*al-fitrah*) bestowed with the sacred function as the *khalifah* of God on earth.

Furthermore, by virtue of being the *khalifah* of God on earth and occupying the central position he does hold, man is the channel of grace for nature. The spiritual man is the means whereby nature breathes of the spiritual life and is prevented from suffocation and destruction, as also confirmed by Western Hermetical and alchemical writers like Flamel and Jakob Boehme. Were man to cease completely follow the spiritual life and lose his contact with the spiritual world, he would also cease to be source of light for nature and in fact would turn toward destruction and vilification of nature. The relation between modern industrial societies and virgin nature should provide an occasion to pause and meditate on this relationship.¹⁴

For Islamic Sufism, Prophet Muhammad is the example of a perfect man who Muslims must turn to as a model. There are several essential concepts within *tawhid*, and one is the role of human beings to fulfill their function on earth. Nasr emphasizes the crisis that results when modern man fails to follow this function or rebels against it. This failure is due to the separation of reason from the spirituality. However, the Islamic view offers a balance whereby man can expand his rational view into a higher dimension. Knowledge and religion can work hand in hand to liberate man from ignorance and reach peace and harmony.

If modern man has been able to dominate but at the same time destroy nature and himself more than men of all civilizations, it is precisely because with him more than ever before reason has been made independent of its principle. In such a condition reason becomes like an acid burning through the tissues of the cosmos and at the same time is powerless before the infra-human and irrational forces that revolt against it from below, in the same way that it has rebelled against the intellect above it. The relation between rationalism and the spiritual and intellectual heritage against which it rebelled on the one hand, and the irrationalism of modern times on the other, is very similar and in fact nearly the same thing as the humanism which rebelled against the theomorphic concept of man only to end in being threatened by the infrahuman forces it has itself liberated.¹⁵

Hope and Young discuss Nasr's view that Muslims are a kind of "middle people" between the Oriental traditions and Western Christianity. Islamic teachings believe in a hierarchy of knowledge covering juridical, social, theological, gnostic, and metaphysical sciences derived from the Quran. So within Islamic civilization, the development of philosophical, natural and mathematical sciences are interwoven with the perspectives of Islam. All Islamic sciences ultimately affirm the Divine Unity.¹⁶

Scientia Sacra

Scientia sacra is the sacred knowledge at the heart of every religion. It is the center and defines tradition. In “*The Knowledge and the Sacred*” Nasr explains that:

Scientia sacra is not the fruit of human intelligence speculating upon or reasoning about the content of an inspiration or a spiritual experience that itself is not of an intellectual character. Rather, what is received through inspiration is itself of an intellectual nature; it is sacred knowledge. The human intelligence which perceives this message and receives this truth does not impose upon it the intellectual nature or content of a spiritual experience of a sapiential character. The knowledge contained in such an experience issues from the source of this experience, which is the Intellect, the source of all sapience and the bestower of all principial knowledge, the Intellect which also modifies the human recipient that the Scholastics called the potential intellect.¹⁷

This single Source of all knowledge underlies all traditions. Through the manifestation of the sacred knowledge, it helps us to understand the ontology and metaphysical explanations about reality in the various traditions. One important concept in Islamic tradition is *wahdat al-wujud* (A Doctrine of Transcendent Unity). This concept explains how the multiplicity of realities are in fact a reflection of the Absolute. Thus through the sacred knowledge, man can understand the Truth. Nasr explains that

Man lives in the world of multiplicity; his immediate experience is of objects and forms, of existents. Yet he yearns for unity, for the unity, for the Reality which stands beyond and behind this veil of the manifold. One might say that *mahiyyah* (quiddity) of man is such that he yearns for the experience of *wujud* (existence). It is the nature of man,

and in this realm of terrestrial existence of man alone, to seek to transcend himself and to go beyond what he “is” in order to become what he really is. Man’s mode of existence, his acts, his way of living his life, his inner discipline, his attainment of knowledge, and his living according to the dictates of Being affect his own mode of being. Man can perfect himself in such a manner that the act of *wujud* in him is intensified until he ceases to exist as a separate ego and experiences the Supreme Being, becoming completely drowned in the ocean of the Reality of *wujud*.¹⁸

In addition, we read Ibrahim Kalin’s article on *the Sacred versus the Secular: Nasr on Science* sharing his insight that the primary goal of Islamic sciences from medicine to geometry is to disclose the ‘unity and interrelatedness of all that exists’. He explains the term *asalat al-wujud* (Doctrine of the Primacy of Existence) prescribed by Mulla Sadra and expounded by Nasr in many of his writings that the Being is the standing condition of all knowledge. Every act of knowing, whether based on the senses or the intellect, presumes a larger context of intelligibility provided by the all-inclusive reality of Being.

In summary, from the perspective of Sufism, all knowledge must lead to the Sacred as it reflects the unity and the interrelatedness of all that exists. The environmental crisis then cannot be solved at a merely ethical level but only by a deep change of knowledge. In the context of the *Religion and the Order of Nature*, Nasr says that

What is needed is a rediscovery of nature as sacred reality and the rebirth of man as the guardian of the sacred, which implies the death of the image of man and nature that has given birth to modernism and its subsequent developments. It does not mean the “invention of a new man” as some have claimed, but rather the resurfacing of the true man, the pontifical man whose reality we still bear within ourselves. Nor does it mean the invention of a sacred view of nature, as if man could ever invent the sacred, but rather the

reformulation of the traditional cosmologies and views of nature held by various religions throughout history. It means most of all taking seriously the religious understanding of the order of nature as knowledge corresponding to a vital aspect of cosmic reality and not only subjective conjectures or historical constructs.¹⁹

Next we will discuss a critique of Nasr's *scientia sacra*.

Critiques on Nasr's Concept *scientia sacra*

Although the concept of *scientia sacra* reflects the esoteric dimension from the Sufi perspective, some would contend that this concept alone is not sufficient. Ma'rif discusses this in his article "On the Integration of Science and Religion: Between Sacred Science and Wilayat al Faqih" that this *scientia sacra* needs to be complemented by *Wilayat Al Faqih*, which represents the social order in the exoteric dimension. *Wilayah* means power or authority and *faqih* means the scholar. Ma'rif raises the questions "What kind of social order of Islamic civilization can maintain *fithrah* (the primordial religion) and who has the right to decide the best system to ensure that it is not disconnected from God as is the case of Western civilization and modern science? Who is authorized to assess the products of science?" Ma'rif refers to Javadi Amuli and his transcendental philosophical approach and points out that there is a gap between science and religion in Nasr's concept. According to Amuli's theory, reason (intellect) is divided into three aspects i.e. reason (intellect) refers to knowledge of experimentation and scientific procedures; reason (*'aql*) knowledge of religious text; and lastly the intellect (*'aql*), *ijtihad* is authoritative and valid as narrative. The last category refers to the sacred knowledge possessed by the Prophet and the Imams. Ma'rif alleges that Nasr only understands knowledge in respect to the first and the second, but he does not consider religious authority important for evaluating the results of the discoveries of scientists who claim scientific insight through the inspiration of God. He claims that Nasr's concept lacks the criteria

of distinction between *halal* and *haram* which can be certified only by scholars. Thus the sacred knowledge that scientist has found from his insight needs to be approved by the authorized Islamic scholars in order to maintain peace and justice. Ma'ruf explains that:

In the Shiite tradition, *Wilayat Al Faqih* is a knowledge free from errors and exclusively owned by the prophets and the holy Imam. It is only possessed by caliphs mandated by God. The content of sanctity includes aspects of speech, action and inaction. Thus the *Wilayat Al Faqih* is a benchmark for the sanctity of the Prophet and the twelve Imams, so that the individual receives ultimate sanctity only by reflecting on God through them. Sanctity can indeed come from self (through individual effort), but at the highest level it comes from authority Wali Faqih pious and fair ('adl) which is subject to Islamic law and governance.²⁰

Therefore, the ideal of the integration of science is ethically impossible without governance. Ma'ruf further elaborates that "Justice as a companion of *tawhid*, is the criterion of *faqih* and the measure of the welfare of the community. With justice, *Wilayat Al Faqih* can accommodate the various goals concerning science, involving the scientific community."

Response to Ma'ruf's Critique

This critique by Ma'ruf describes clearly the challenge of Nasr to traditional religious authority. As the researcher observes that Nasr's interest is towards reforming society through the traditionalist's approach which emphasizes the revitalization of the sacredness in all forms of science and knowledge as it was during the golden age of Islam. But it is the way he tries to accomplish this which is important. By combining his interests in tradition, *tawid* and *scientia sacra*, by combining perennial philosophy with Sufism, by balancing science with a universalized concept of the transcendental, he is able to provide a framework that can

encompass both the secular world and the world of the various religions. Nasr is not trying to dictate the religious approach of Shiism but he did translate several texts to promote the understanding of Islam. Therefore, the issue concerning the *faqih* or scholars who have the authority to protect the Islamic social order is not discussed. The question is relevant insofar as how religious authority can be fair in their attitudes towards innovative ideas and in relation to the larger world? How can religious authority lead its community based on a balanced approach to science and religion? This question leads to the next part of the application of the concept of core principle of *tawhid* which is the heart of *scientia sacra* in the modern education.

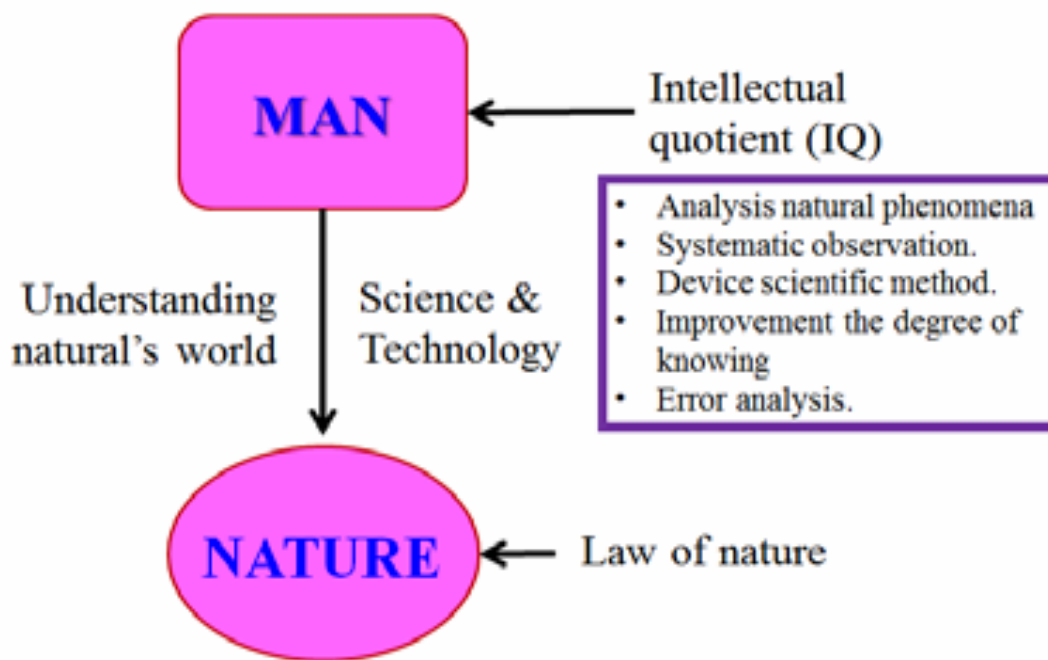
Application in the STEM Education System

During the Islamic Declaration on Global Climate Change in 2015, the Islamic leaders in all fields gathered to make a firm commitment to the protection of our planet. They called upon the affluent nations and oil-producing states, the leaders, corporations, financial institutions, media, and all the people of the world to be attentive to this challenge. But they recognized that the most important groups are the educators and educational institutions. Thus we see the urgency to reflect on the STEM educational system which plays a crucial role in economic development in the 21st century. The STEM education has become dominant in our contemporary society. Science, Technology, Engineering and Mathematics (STEM) fields promise wider job opportunities, and high income. But STEM education is based on purely objective knowledge and it is secular based. It has been criticized as a one-sided source of knowledge, neglecting subjective knowledge and producing people with ‘Excellence without a soul’ as mentioned by Harry Lewis (2006).

The effort has been made to integrate STEM education and the Sacred knowledge in Islamic tradition. Othman, Ibrahim, Yaacob, Zaharim, Rahim & Nopiah (2015) present ways to bring science knowledge and religion together. A study project by the Institute of Islam Hadhari, Universiti Kebangsaan Malaysia (UKM) implements several programs

in STEM education and also Islamic education. Theoretically there are two types of integration: bounded and blended. Bounded integration is defined as different entities are joined in a system, such as the idea of “unity in diversity,” which we find for instance in the Pancasila principle of Indonesia. Pancasila would suggest that different cultures, religions and races are bounded together by a system. Blended integration refers to an integration intended to forming a new entity based on knowledge, human values and culture. Here, STEM education is blended with Islamic cultural and moral values.

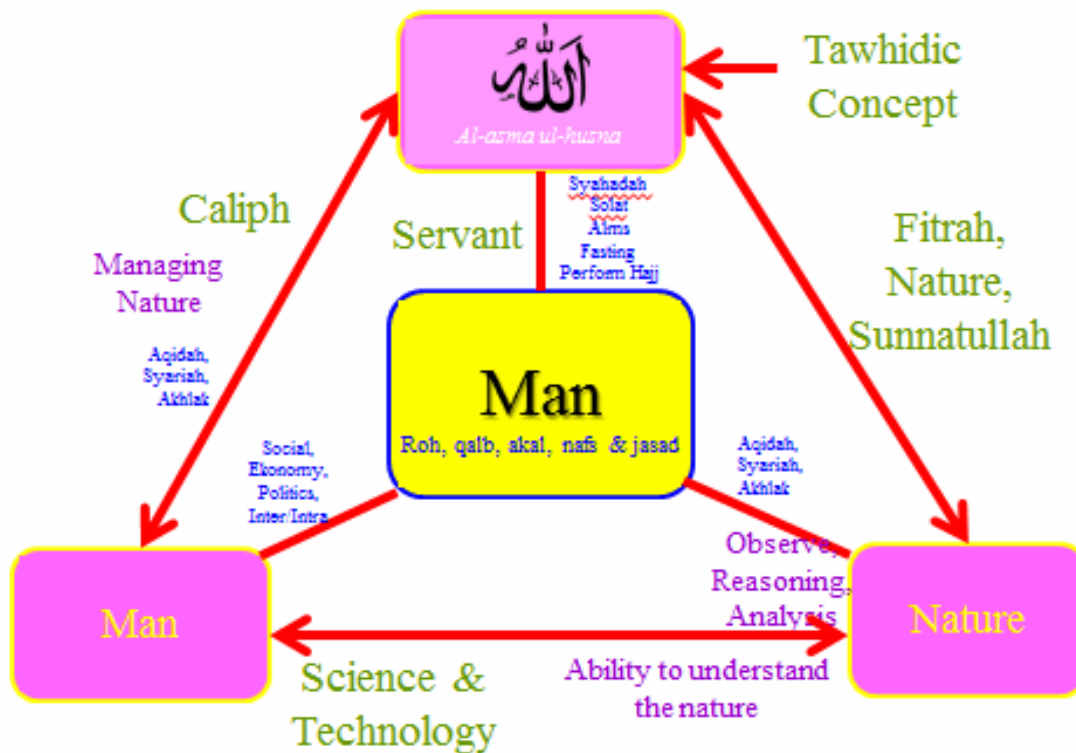
The conventional STEM education can be summarized by the diagram below:



Conventional Epistemology of STEM Education

The article describes that in the conventional STEM education, the relationship between man and nature is based on three scientific assumptions. Firstly, the natural world has a certain order and arrangement; secondly, man has the reasoning ability to comprehend nature by carrying out investigation through rational argument; and lastly through scientific investigation, the valid conclusion is obtained despite different cultures

and settings. Othman et al., then proposes their new perspective based on Islamic teaching. In the Quran, there are three categories of verses revealing three levels of relationships: Man - God relationship, Man - Man relationship, and Man - Nature relationship. The Man - God relationship concerns Islam, imam, solat, alms, and fasting, which are prescribed for Muslims as the principle for living. The Man - Man relationship refers to the social order and self-identity (manners, ethics, character, etc.). The Man - Nature relationship is the connections between natural phenomena such as universe, earth, water, rain, animals which are needed to understand how to live harmoniously with nature. Thus these relationships reflect the concept of *tawhid*. The STEM education as stated in the Quran shows man as a focal point in managing natural resources and human capacities. To God, man has two responsibilities, as a servant and as a *caliph* of Allah. The diagram showing the relationship of Man-Nature as depicted in Islamic view is shown below:



Epistemology of STEM Education as stated in the Quran

This research further shows that in order to implement the module, students must understand that STEM education is a process for understanding nature. This process is an acquired knowledge. Then students will learn the aspects of STEM in connection with the *tawhidic* concept to have the insight of the relationship between God, Man, and Nature. This research claims that understanding and implementing STEM in the Tawhidic Education System can avoid the moral decadence and overexploitation of natural resources.

Here is an example of integrating secular education with the Islamic tradition which attempts to enrich the spirituality in normal classes. This requires a collaboration of all parties concerned to channel the knowledge. School administrators, teachers, and staff are required to understand the new STEM Tawhidic concept and then to continue to develop their attitudes. Learning is not only in the classroom but also in the overall environment that influences a students' thoughts and actions. The school needs to introduce this concept into reality and not just restrict it to book-learning which has little impact on human transformation. This suggest that the collaboration of a community to create a Tawhidic environment is necessary. Furthermore, the collaboration outside the school involving the local community, family, religious institutions as well as the local government and the private sectors is the challenge that needs to addressed.

Conclusion

Through the earlier discussion, we see that the perspective of Seyyed Hossein Nasr is a call to return to the sacredness of nature. Not only through the Islamic tradition but also in the tradition of the perennial philosophers, towards all people both religious and secular. The concept of sacredness can be the way for humankind to transform their consciousness to survive the current environmental crisis. A tradition is like the roots of a tree, although things change the roots of the old tree will remain. Nature always has her way to regain her strength and vigor to survive through the abusive power of modern man.

For me, I appreciate the traditionalist approach and agree with the idea of rediscovering the sacredness in our time. Referring to the Sacred Web Conference 2014, [part of the message from HRH The Prince of Wales](#) reflects this attitude towards the world, we read his message that

We have lost our way because we can no longer see clearly. And so we have forgotten. A world of parts has replaced a world of wholeness. A world of separation has replaced a world of connectedness and entanglement. The secular has pushed aside the Sacred.²¹

He also shares his experience of how the young generation rediscovers the sacred of the Tradition.

Looking at the title of this year's conference, "Rediscovering the Sacred in our Lives and in our Times", I am reminded of a recent event that gave an example of how the Sacred can be rediscovered, through practice. A former student of my School of Traditional Arts was recently involved in giving a workshop on sacred geometry to a group of professional designers working for companies such as Tesco, John Lewis, Waitrose and Apple. Inevitably, such has been the denial of access to this knowledge, none of these designers had ever seen such geometry before, and the results were astonishing—and actually rather encouraging. These designers were quite literally amazed. It was as if a veil had been lifted from their eyes and, for the first time, they saw pattern and order and relationship and meaning.²²

We cannot reject the importance of science and technology in our current times. The challenge for all is to maintain a balance between science and religion. With this balance, man, nature and God will remain in harmony which prevents the destruction of our environment. This is so urgent today, that interfaith dialogue should be encouraged to promote the universal spiritual dimension for environmental protection by first

educating the younger generations. Such a model like the Tawhidic Education System, for example, can guide the younger generation to learn to appreciate nature and encourage their responsibility and stewardship. As the Hadith revealed by Abu Sa'id Al-Khudri says:

The world is sweet and verdant,
and verily Allah has made you stewards in it,
and He sees how you acquit yourselves.²³

ENDNOTES

¹ Nasr, Seyyed. *Man and Nature: The Spiritual Crisis of Modern Man*. (Great Britain: Cox & Wyman Ltd, Reading, 1976), 13-14.

² Ibid, p. 31.

³ Yusuf, Ali. *The Holy Quran*. (Amana Corp, 1983), 50:16.

⁴ Schuon, Frithjof. *The Transcendent Unity of Religions*. (Wheaton, Illinois: Quest Books Theosophical Publishing House, 1984), xii.

⁵ Ibid, p. xii- xii.

⁶ Nasr, Seyyed. *The Essential Seyyed Hossein Nasr*. (Bloomington, Indiana World Wisdom Inc., 2007), 24.

⁷ Nasr, Seyyed. *Man and Nature: The Spiritual Crisis of Modern Man*. (Great Britain: Cox & Wyman Ltd, Reading, 1976), 18-19

⁸ Kalin, Ibrahim. *The Sacred versus the Secular: Nasr on Science*. (USA, Illinois:Open Court Publishing Company, 2001), 445-462.

⁹ Nasr, Seyyed. *Knowledge and the Sacred*. (Albany: State University of New York Press, 1989), 54.

¹⁰ Kalin, Ibrahim. *The Sacred versus the Secular: Nasr on Science*. (USA, Illinois:Open Court Publishing Company, 2001), 445-462.

¹¹ Nasr, Seyyed. *The Need for a Sacred Science*. (Albany: State University of New York Press, 1993), 30.

¹² Murata, Sachiko & Chittick, William C. *The Vision of Islam*. (New York: Paragon House, 1994), 43.

¹³ Jalalu'l-Din Rumi, Maulana. *Selected Poems of Rumi*. (USA: Dover Publications Inc, 2011), 54.

¹⁴ Nasr, Seyyed. *The Essential Seyyed Hossein Nasr*. (Bloomington: Indiana World Wisdom Inc., 2007), 67.

¹⁵ Ibid, p. 68.

¹⁶ Hope, Marjorie & Young, James. "Islam and Ecology." (June 13, 2020), <http://ruby.fgcu.edu/courses/twimberley/EnviroPol/EnviroPhilo/IslamAndEcology.pdf>.

¹⁷ Nasr, Seyyed. *Knowledge and the Sacred*. (Albany: State University of New York Press, 1989), 119.

¹⁸ Nasr, Seyyed. *The Essential Seyyed Hossein Nasr*. (Bloomington: Indiana World Wisdom Inc., 2007), 126-127.

¹⁹ Nasr, Seyyed. *Religion & The Order of Nature*. (USA: Oxford University Press, 1996), 287.

²⁰ Ma'ruf, Muhammad. "On the Integration of Science and Religion: Between Sacred Science and Wilayat al Faqih." *Prajna Vihara* Vol. 16 No.2 July-December (2015), 110.

²¹ "Rediscovering The Sacred in Our Lives and in Our Times", SACRED WEB, (24 June 2020) http://www.sacredweb.com/conference14/conference_introduction.html.

²² Ibid.

²³ The Islamic Foundation For Ecology And Environmental Sciences. ifees. ecoislam (15 June 2020) <http://www.ifees.org/>

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