

**A CRITICAL STUDY OF THE VIEWS
OF SAYYED HOSSEIN NASR ON THE PHILOSOPHICAL
FOUNDATION OF ISLAMIC SCIENCE**

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Abstract: In recent years, Muslim scholars have written on the need of the revival of Islamic science and its philosophical foundation. The main aim of this paper is to examine the views of Sayyed Hossein Nasr, who is considered as one of the pioneers in the area of the revival of Islamic science. Other than Nasr, Muslim scholars argued that the Islamic science is different from modern Western science in terms of its purpose and philosophical foundation and delineated their viewpoints within the philosophical foundation of modern Western science. In terms of method, Islamic science may not be different from modern Western science but it differs in its philosophy and purpose. This paper uses a qualitative method employing content analysis to examine the insights of Seyyed Hossein Nasr critically and analytically with reference to other scholars such as Muzaffar Iqbal, Naquib al Attas, Osman Bakar, Alparsalan and Ziauddin Sardar.

Keywords: Sayyed Hossein Nasr, Islamic science, philosophical foundation, Islamic philosophy

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1. Introduction

The revival of Islamic science and its philosophy has been the focus of many scholars since nineteen sixty onwards. It has received a great deal of attention around the globe. Other than Nasr, the works of various scholars, such as Muzaffar Iqbal, Naquib al Attas, Alparsalan, Ziauddin Sardar and Osman Bakar, have shed light to identify the fundamental difference between the philosophy of Islamic and modern Western science. As the advocate of Islamic science Seyyed Hossein Nasr stands at the top and claims that Islamic science is extremely different in terms of its origin, characteristics, and objectives from those of modern Western science. The aim of this paper is to examine the views of Nasr with regard to the above-mentioned advocates of Islamic science. First, we will investigate the views of Nasr on Islamic philosophy, its meaning, origin and nature, and its role in the development of Islamic science. Second, the views of Nasr will be examined on the philosophy of Islamic science, its meaning, and the metaphysical and philosophical premises. For this purpose, the method of content analysis with a focus on comparison will be employed.

2. The meaning of Islamic philosophy

As a great proponent of traditional Islamic philosophy, Nasr prefers to use the traditional meaning of the term ‘philosophy’. He puts emphasis on the use of the term *falsafah* as identical to *ḥikmah* and examines the use of these terms in the light of traditional sources and definitions presented by the Islamic philosopher (Nasr 2007: 100). He underscores the terminologies in Islamic perspective as used in Islamic civilization. He argues that the term ‘philosophy’ is translated from the Arabic term ‘*falsafah*’ and explores the meaning of the latter term into Islam and its civilization (Nasr 2007: 97). He affirms that from Islamic perspective the philosophy is understood today, as an endeavour to acquire ultimate knowledge of things by using rational and sensual faculties without receiving any help from the light of Divine intellect, has no legitimacy. For him, this view is a product of humanism which does not imply with Islamic perspective (Nasr 2007: 98).

First, he determines the use of these terms in primary sources; the Qur’ān and *Ḥadīth*. Nasr identifies the use of the term *ḥikmah* in the following statements of the Qur’ān: He giveth wisdom [*ḥikmah*] unto whom He will, and he unto whom wisdom is given, he truly hath received abundant good (The Qur’ān 2: 269). Nasr also quotes a *Ḥadīth* for instance: The acquisition of *ḥikmah* is incumbent upon thee: verily the good resides in *ḥikmah* and “Speak not of *ḥikmah* to fools” (Nasr 2007: 101). Then he refers to a few definitions of philosophy developed by Peripatetic philosophers such as *al-Kindī*, *al-Fārābī* and *Ibn-Sīnā*. For example, philosophy according to *al-Kindī*: ... is the knowledge of the reality of things within man’s possibility, because the philosopher’s end in his theoretical knowledge is to gain truth and in his practical knowledge to behave in accordance with truth (Nasr 2007: 101). Nasr claims that *al-Fārābī* had accepted the definition of *al-Kindī* with some addition, as he distinguishes

between “philosophy rooted in certainty” (*falsafahyaqiniyah*) which is demonstrative (*burhanī*), and ‘philosophy deriving from opinion’ (*falsafahmaznunah*), founded on dialectics and sophistry (Nasr 2007: 101). Nasr also quotes *Ibn-Sīnā* who added an element of realization and perfection in the definition of *ḥikmah*, according to him: *Ḥikmah* is the perfecting of the human soul through the conceptualization of things and the judgment of theoretical and practical truths to the measure of human capability (Nasr 2007: 102).

Nasr asserts that *Suharwardī* and *Ishraqī* schools played a major role in terms of establishing the close binding between philosophy and religion. Sufism focusing on esoteric dimensions wedded philosophy with spiritual realization considering former as an esoteric dimension of revelation and later as spiritual practice relate to religious discipline (Nasr 2007: 102). Nasr considers the contribution of *Sadr al-Din Shirazi* known as Mulla Sadra, as a finest work in Islamic philosophy. Nasr acknowledges the definition of *ḥikmah* provided by him with ‘fullness and synthetic’ quality. He records the definition given by Mulla Sadra and states: *Falsafah* is the perfecting of the human soul to the extent of human possibility through knowledge of the essential realities of things as they are in themselves and through judgment concerning their existence established upon demonstration and not derived from opinion or through imitation. Or if thou liketh thou canst say it is to give intelligible order to the world to the extent of human possibility in order to gain ‘resemblance’ to the Divine (Nasr 2007: 103).

Nasr upholds that conceptually it is not sound to use the term ‘natural philosophy’ for the study of nature in Islamic civilization because the epistemological meaning of natural philosophy is not same in Islamic science as it was used and understood in Greek or Roman tradition (Iqbal 2007: 22). In Greek civilization this term has been used in broader perspective for three major categories; metaphysics, mathematics, and physics, whereas the use of same term in Islamic science will lead to some complications because there are various disciplines and branches in Islamic science which have their own specific names (Iqbal 2007: 23).

From this perspective, *ḥikmah* in terms of knowledge and action guides humans and saves them from falling victim to their animalistic desires which degrades their status to the lowest level. *Ḥikmah* enables man to re-establish his lost angelic position in which he was at the stage of his creation (Iqbal 2007: 104).

3. Historical development of Islamic philosophy

In agreement with many historians, Nasr traces the origin of the Islamic philosophy back to the heritage of Greco-Alexandrian philosophy. The Greek heritage was translated into Arabic in the ninth century by the Muslims. During this period of translation, Nasr infers that Muslim scholars were so much concerned about the revelation and the Prophetic tradition; both were the central reality for them. According to Nasr, Greek philosophy was considered by the Muslim philosophers as rooted in prophecy. They continued their learning and developed it as they identified

the origin of what they were learning with revelation (Nasr 2006: 108). In other words, one of the inspirations for Muslims to mastering the Greek philosophy was the fundamental characteristic of divinity which was still rooted in the Greek philosophy and perceived by the Muslim philosophers.

Nasr, in his writings, also sheds light on the influence of certain Qur'anic themes on Islamic philosophy. According to him, this influence has been manifested in Islamic philosophy throughout its history, especially, during the period when the philosophy was reformed completely into actual theosophy. For Nasr, the absolute form of theosophy had the exact meaning as *al-ḥikmah al-ilahiyah* in Arabic. Essential element of theosophy is the 'unity of the Divine Principle' which is ultimate Reality or *al-Tawhīd* as a foundation of the Islamic message. Nasr claims that Muslim philosophers were monotheists '*muwahhid*' and they found authentic philosophy under the light of *Tawhīd*. They studied and learned the philosophy of Pythagoras and Plato, because their philosophy for them was basically based on the unity of Ultimate Principle. But they showed no interest in learning the later modes of Greek and Roman philosophy because they were 'cynical and agnostic' (Umar 2001: 122).

Islamic philosophy is basically based on twin sources of transcendent knowledge, revelation and intellectual intuition. Thus, Islamic philosophy is actually 'prophetic philosophy', in which revelation performs a major role at both macrocosmic and microcosmic levels (Umar 2001: 106). Although there has been a tussle between the Qur'anic description of Unity and understanding of Muslims what they learned from Greek tradition. According to Nasr this tension was changed into 'a synthesisation of the highest intellectual order' due to the intellectual efforts of some later philosophers. However, he enunciates that throughout the treatment of philosophy the Qur'anic doctrine of Unity remained dominant (Umar 2001: 122).

In Nasr's presentation, Islamic philosophy like traditional philosophy is based on certainty instead of doubt and assumptions. In Islamic or traditional philosophy, human mind is actually enlightened by the light of Divine intellect which saves a human being from error and leads him to certain knowledge. Islamic philosophy is one of the richest intellectual traditions in the world which possesses illimitable horizons, is related to metaphysical realities and united with illumination (*ishrāq*) and gnosis (*irfān*). Emphasizing the traditional aspect of philosophy, Nasr prefers to call it *falsifah* and *ḥikamā* and as philosophers in our time (Nasr 2007: 98) Sardar disagrees with Nasr and argues that his assessment seems to be based on his personal observation and lacking any authentic reference. One can find the validity of argument from the source of its reference. If Sardar disagrees with Nasr at the point which goes back to Greek tradition, then he should have searched further to sort out the original source instead of blaming Nasr without any strong evidence or reference. The claim might be based on transcendent reality and remained the part of that tradition which has been affected with some fundamental changes. For example, Nasr asserts: What the medieval and even post-medieval West has known of Hermes comes essentially from Islamic sources rather than directly Alexandrian ones, where, from the Wedding of the Greek god Hermes and the Egyptian god Thoth, the figure

of Hermes as the founder of alchemy and a whole ‘philosophy of nature’ come into being (Umar 2001: 107).

Suheyle Umer elaborates that in Islamic philosophy the source Herms of Alexandrian is articulated from the term ‘Hermes Trismegistos’, translation from the Arabic term *al-muthallathbi’thikmah*. A number of Western philosophers and poets were inspired by this phenomenon as they believed that three Hermes were the prophets associated with the golden chain of prophecy starting from Prophet Adam to the Prophet Muhammad [PBUH]. Hermeticism, for Muslim philosophers, was the doctrine based on revelation, thus, they could easily fuse it into Islamic philosophy since both Hermeticism and Islamic philosophy share similar foundation of revelation. In addition, Hermeticism was considered Islamic as it belonged to the prophetic golden chain (Umar 2001: 107). Commenting on the authenticity of this source Suheyle Umer explains that Nasr derives its legitimacy from the inherent principles of Islam. And needless to mention that Islamic tradition is the perfect shape of ‘Judeo-Christian’ elements which were brought to perfection through Islamic revelation (Umar 2001: 107).

According to Sardar, the philosophy of Nasr is the representation of Ismaili thought and Guenon/Schuon worldview. Nasr’s focus on esoteric dimension reflects Ismaili’s tendency and his concern with Gnosticism shows Guenoitic influence on him. Sardar traces Nasr’s philosophy back to the Gnostic tradition of Greek from which stem mystical teachings of Pythagoras, the neo-Platonic philosophy, aspects of Hindu philosophy, and elements of Zoroastrianism (Sardar 1991: 44). But Nasr supports his stance by referring to the Prophetic tradition which articulates the exoteric and esoteric meaning of the text of the Qur’an. Regarding Gnosticism Nasr again goes back to Islamic origin of Sufis tradition in which Gnostic is *Ārif* the seeker of ultimate truth. Based on aforementioned arguments of Sardar, it is hard to confirm that Nasr promotes Ismaili and Guenon worldview. Sardar also criticizes Nasr’s philosophy of science and argues it originates from and founded on Greek fundamental aspects of Gnosticism.

Sardar goes further and accuses Nasr for some of his materials being clearly outside the worldview of Islam, and some belong to narrow interpretation of his Ismaili thought. For Sardar, the link presented by Nasr, between Islamic science and Gnosticism is totally superficial. He claims that a large number of Muslim scientists were not mystics; neither were they Gnostics of the Greek tradition (Sardar 1991: 44).

Dallal acknowledges that both Sardar and Nasr have contributed from critical Islamic point of view and distinguish Islamic science from the modern. Their work on Islamic science is quite influential among the philosophers of science. Their scholarly efforts made a great contribution to scientific tradition in Islam. However, Sardar’s critique for modern science itself is lacking anything specifically Islamic. Ten values: *tawhīd* (unity), *khilafah* (trusteeship), *ibadah* (worship), *adl* (justice) and *zulm* (tyranny), and *istislah* (public interest) and *dhiya* (waste), in the model, articulated by Sardar to replace the modern Western thinking, are based on his personal observation and understanding of Islam. There is no connection of these values to the practice of science from classical Islamic scientific or religious sources (Dallal 2010: 174).

In our opinion, Dallal's assertion that values presented by Sardar have no connection with classical Islamic scientific or religious sources seems to be inappropriate. If we look at those values, every single value has specific relation with and importance in Islam. These values are more concerned with the practice and implementation of science. Secondly, based on the assertion that these values have no connection with classical sources, we should not underestimate his proposal as far as if there is any chance of positive contribution to the venture of Islamic science in any aspect.

While recognising the great contribution of Nasr, Dallal sees that Nasr tends to give an imaginative explanation of Islamic metaphysical framework which becomes difficult to understand. For instance, the interpretation of intellect as 'Divine and not human reason' which is located in heart but not head, is difficult to rationalize (Dallal 2010: 174). According to Dallal, both Nasr and Sardar, while citing statements from the Qur'an, their arguments appear to hold extra meanings and more than what has been established and presented by the Qur'an (Dallal 2010: 175). In addition to this, Dallal questions the metaphysical framework of ancient and Islamic science according to which both share 'conceptions of sacredness and unity of knowledge'. He continues: Yet if the distinctiveness of the ancient metaphysical framework lies in the sacredness and unity of knowledge, then it is not clear how Islamic science would be different from, for example, pagan Hellenistic science (Dallal 2010: 174).

Regarding Dalla's comments on Nasr and Sardar, his critique of Nasr of being imaginative, we would say that when Nasr talks about intellect or intuition in the heart, he indicates the text in the Qur'an which implies clearly that heart has ability of understanding. For instance, the following text in the Qur'an:

And We have certainly created for Hell many of the jinn and mankind. They have hearts with which they do not understand... (The Qur'an 6: 179).

In this statement, heart is mentioned as an organ which has the faculty of understanding. The difference between reason and intellect is obvious. Where the limitation of reason ends, there intellect continues its job in order to observe that reality which is beyond the limitation of reason. Thus, the activity of understanding which befalls on heart is the result of thinking and contemplation. However, Dallal's second point regarding 'conceptions of sacredness and unity of knowledge' in ancient civilization does have genuine reason, because from Nasr's presentation and most probably due to his strong advocacy for perennial philosophy and religious pluralism, there remain no clear difference between the metaphysical framework of ancient civilization and the Islamic.

Nasr assumes that translation of Greek philosophy was completely synthesized and moulded according to fundamentals of Islam and contributed to the development of Islamic science and civilization. But Sardar disagrees with him and believes that it was a great misunderstanding to think that Greek tradition was integrated with Islamic worldview and its principles. He points out the negative influence of

Greek philosophy which inherited the domination of reason and corrupted the minds of Muslim thinkers, thus they developed trends of *falsafa*. After learning about speculation and polemics, rationalists started believing in the unconditional validity of Aristotelian logic (Sardar 1991: 16).

All this activity, particularly, translation of Greek philosophy was undertaken under the supervision of Abbasid rulers in order to use philosophy in their favour to establish and strengthen their kingdom. Sardar makes it clear that they could not find any legitimacy for their authoritarianism within Islam but in Greek philosophy, they took interest and used the dominant element of reason in Greek philosophy to legitimize their totalitarianism (Sardar 1991: 16). Many Muslim philosophers were influenced by Greek philosophy, among them Mutazilites were major proponents of Greek thought who accepted its basic assumptions uncritically while demonstrated severe criticism against Islamic sources and its principles (Sardar 1991: 15).

Sardar asserts that most of the scholars did not accept Greek philosophy as it was alien to the principles of Islamic worldview. Another reason of rejecting Greek philosophy was that it could not find space due to the already well-established disciplines like, sciences of the Qur'an, sciences of *Hadīth* and Islamic jurisprudence etc. He draws attention to the fact that Muslims did not reject Greek philosophy completely, but they acknowledged the role of reason in general arguments and particularly in demonstrating the validity of the religious arguments (Sardar 1991: 16).

Muslims did not reject the role of reason in arguments generally and in advocating religious arguments particularly. They were against the dogmatic assumption about reason alone being capable in knowing the absolute truth and that it can be a principle of ethics. Sardar contends that for some scholars, Greek philosophy did not have any new position regarding methodology. It was articulated by al-Ghazali that Qur'an is the first example of using logic and Aristotelian syllogism (Sardar 1991: 16).

Eventually, *falsafa* received poignant criticism from Asharites and Mutazilites and lost ground. The victory of Asharites and their dominant thinking which opposed reasoning and blind imitation resulted in the emergence of three major trends: the theologians, the philosophers and gnostics. All of them shared two basic characteristics; blind imitation and authoritarianism which ultimately caused Islamic science to decline (Sardar 1991: 18).

4. The role of Islamic philosophy in the development of Islamic science

Historically, philosophy has emerged and remained an essential discipline of Islamic science. Emphasizing the role of philosophy as such in the establishment of the tools of logic and a number of disciplines, Nasr expounds the role of philosophy in the development of Islamic science. He describes two perspectives of Islamic revelation in which it manifested itself in several dimensions. Islamic revelation manifested to man on the levels of *al-islām*, *al-īmān*, and *al-ihsān*, from one perspective, as *sharīah*, *ṭarīqah*, and *ḥaqīqah* from the other (Nasr 2007: 97).

In order to understand the role of philosophy in Islam, Nasr suggests that one should consider Islam in its broader perspective. For that, he places greater emphasis on the dimension of *al-ḥaqīqah*. The focal point of aforementioned dimension constitutes traditional philosophy, metaphysics and the very aspect of Islamic perspective in which *sapientia*¹ remained an integral part throughout Islamic history. Nasr makes it clear that it is impossible to understand the actual role of ‘philosophy’ by connecting it with any one specific dimension of Islam. He denounces the practice of orientalist who identified Islam with specific discipline such as *Sharīah* or *Kalām* and then studied them in connection with philosophy or metaphysics (Nasr 2007: 97).

During the early period, *falsafah* played a significant role in the formation of Islamic intellectual sciences as it was the formative period of the Islamic intellectual sciences. *Falsafah* assisted Islamic civilization to absorb and synthesize the pre-Islamic² science in order to formulate the Islamic science. Nasr highlights the influence of *falsafah* on various disciplines of science and articulates: The science of logic, the problem of the classification of the sciences, the methodology of the sciences, and their interaction with the rest of Islamic culture were all deeply influenced by *falsafah* and its particular elaboration in Islam (Nasr 2007: 106).

He asserts that Peripatetic philosophy – among the adherents like *al-Fārābī* and *Ibn Sīnā* – and the philosophical school of anti-Peripatetic – such as *Muḥammad Ibn Zakariyyā*, *al-Rāzī* and *al-Bīrūnī*, all contributed significantly in the development of Islamic science. Due to the existence of anti-Peripatetic philosophy, many new ideas were developed in the domain of Islamic science. The term *hakim* which stands for physician, scientist, and philosopher at once, shows the strong relation between two different trends of philosophies (Nasr 2007: 107).

Falsafah appeared as one of the major disciplines in Islamic culture which assisted intellectual sciences to flourish. Due to its significance, several tools of analysis such as, logic and rational inquiry were established for the development of transmitted sciences. The most considerable impact of *falsafah* was on logic which was developed in accordance with Islamic framework of knowledge, thus it performed a positive role to prepare the mind for illumination and contemplation. The tools of logic were extended to create a wider scope, including grammar, rhetoric and even classification and categorization of *Hadīth*. It was also applied to economics, to the development of geometry and arithmetic, exercised in the master work of Islamic architecture which exists today. While featuring the development of various disciplines of Islamic science, Nasr infers that in addition to the rationalizing tendencies of the Graeco-Alexandrian doctrines embraced by the Muslim Peripatetics, a holistic milieu of

¹ ‘Sapientia’ or ‘sapience’ refers to great wisdom, in Islamic tradition it refers to “presential knowledge” or *al-‘ilm al-ḥudūrī*. For Nasr this is the knowledge of an immediate and direct nature. See, *The Essential Seyyed Hossein Nasr*, 131.

² The term ‘pre-Islam’ does not reflect the truth and reality. As Prophet Adam to the Prophet Muhammad (PBUH) the Deen which was revealed was Islam. Therefore, there is no historical phenomenon which can be termed as ‘pre-Islam’. To reflect the period of the Prophet Muhammad (PBUH) one can use either before the Prophet Muhammad (PBUH) or after him. We need to realize that the use of the term ‘pre-Islam’ by Nasr refers to the period of the appointment of the Prophet Muhammad (PBUH) as a Prophet.

rational thinking and logical reasoning was established in the history of Islamic science. That intellectual milieu helped several disciplines of Islamic science and arts to develop.

According to Nasr, the science which was established by the Muslim scientists from the second Islamic century onward was Islamic in nature as the natural phenomena was studied in the light of the Qur'an and the *Hadīth* (Nasr 2003: 85-86).

Any intellectual activity based on observation and experiment conducted within the framework of the Islamic worldview was considered Islamic science (Alparsalan 1996: 38). For Osman Bakar, Islamic science 'is consciously based upon the metaphysical, cosmological, epistemological, ethical, and moral principles of Islam' (Bakar 1991: x).

For Sardar, the epistemology and methodology along with outlook in which the Islamic identity was evident was considered as Islamic science.

5. The philosophy of Islamic science – Islamic worldview

It is now evident that the Islamic science was founded on the basis of the worldview of Islam. According to which the existence of reality is based on hierarchy. From Islamic metaphysical point of view, all aspects of reality and being are integrally related to each other and constitute ultimate reality. Because of this fundamental unity and integration, there is no existence out of this framework. Thus, secular approach in Islamic science is rejected. In fact, throughout the history of Islamic science we do not see any opposition to sacred in the form of secular. Nasr upholds that we do not even find it in the classical dictionaries, the translation of secular in Arabic. The formulation of the term '*almāniyyah*' as the Arabic translation for 'secular' was the later development (Iqbal and Nasr 2013: 66).

The reason of not having the word 'secular' in Arabic is the fact that there exists a unity in reality as claimed by the Islamic worldview. Secular or secularism was not worth mentioning or conceptualizing. It was the integral approach of Islam that deals with the reality and lives accordingly. Having direct correspondence with reality of life, Islam in broader perspective as a worldview does not restrict its scope merely to worship and rituals, but it is a *dīn* in a wider sense and a way of life. This integral approach to life and reality is the major element which is operative behind the Islamic science (Iqbal and Nasr 2013: 66).

Muzaffar Iqbal asserts that the religious view as a view of the reality of the world establishes the philosophical foundation of Islamic science. All things are Islamic if they are based on *Tawhidic* worldview which is a principle of unity of reality. Because of this *Tawhidic* worldview, the study of nature is conducted based on the physical and metaphysical principles of Islam and ends up with the spiritual reality of existence. Consequently, there appears a triangular bond which interconnects experimental science with the philosophy of nature and *Tawhidic* worldview and performs a significant role in establishing the foundation of Islamic science (Nasr and Iqbal 2007: 12).

Islamic science is distinguished from the modern Western science based on knowledge of the reality granted to mankind through the process of revelation. According to this viewpoint, subject matters of Islamic science such as man, nature, universe, time and space are dealt differently from modern Western science which is mainly based on different understanding towards these subjects. For Sardar, from the worldview of Islam, main objective of Islamic science is to serve society and people.³ In addition to this, Islamic society promotes brotherhood, augments spiritual awareness and minimizes the pragmatic and materialistic approach to life and the universe. Thus the Islamic science which follows these parameters is different in character and objectives from the modern Western science (Sardar 1991: 3).

According to him, Islamic worldview does not conflict with the idea of science as Islam always encourages its adherence to inquire knowledge of the physical world based on observation and experiment. Having considered the knowledge sacred, everyone, whether man or woman, is persuaded to aspire to knowledge as a sacred duty. The question actually directs to the practice of science, which varies according to the time and context as well as the perceptions of different scientists (Sardar 1991: 2).

Sardar actually denounces the identical presentation of mysticism and Islamic science from Nasr because it causes confusion in human mind. He argues that Nasr does not differentiate between Islamic science and Gnostic mysticism. Islamic science of Nasr is surrounded by his particular view of Islamic cosmology. His view of Islamic cosmology is comprised of various expended elements, e.g. 'Qura'nic symbolism, ideas of *sūfī* doctrines, theosophical and philosophical explanation of cosmos, numerical symbolism and traditional astronomy (Sardar 1991: 43).

Essential components of Islamic cosmology, founded by Nasrs, are theosophy, Greek philosophy, magic, numerology, and the occult. He confines Islamic science to this cosmology at the extent that Islamic science appears to be identical with Gnostic esotericism. For Nasr, the methodology of Islamic science is the same as the methodology of gnosis. In the epistemology and psychology of Nasr's Islamic philosophy, access to ultimate knowledge is subjected to the personal experience of gnosis. Consequently, there is no room for objectivity, thus, it is forfeited at the disposal of personal mystical experience and self-satisfaction. Surprisingly, Nasr sees major involvement of Greek tradition and methodology in Islamic philosophy and argues that most part of Muslims' scientific work was founded on Greek civilization (Sardar 1991: 43).

Sardar, therefore, condemns Nasr for causing a serious confusion in the academia by conceptualizing mystical science. For him, Islamic science has nothing to do with Gnosticism (Sardar 1991: 5). Nasr's activities give science magical and supernatural qualities; and despite his concern for mystical enlightenment, he actually believes in the objective, value-free nature of mathematics. However, mysticism, objectivity

³ Similar claim was made by modern Western scientists. They claim the main objective of science is to serve humanity and to strive for the wellbeing of mankind. But the reality is otherwise. The main goal of modern Western philosophy of science is to control the laws of nature and resources for the sake of power and profit. Here, we should bear in mind, the ethical and moral aspect of science which is an essential part of Islamic science and its philosophy.

and neutrality in their methodology are not relevant to science. Unbiased observation is far from reality in scientific venture. It is, Sardar argues, because every single concept, theory, thesis or hypothesis goes through and develops out of certain worldview and culture. According to Sardar, scientists interfere and influence their observation according to their ideas and preferences based on the norms and values of their society (Sardar 1991: 43).⁴

For Qadir, Islamic philosophy addresses the existence of humankind in a comprehensive manner as it deals with the wholeness of man and the oneness of the ultimate reality. In Islam the objective of philosophy did not differ from that of theology. The main objective of both of them is to pursue mankind for truth and to know the true nature of all existents (Qadir 1988: 77). He maintains that Islamic philosophy calls upon the wholeness of human being to think about the unity of the ultimate reality. Hence, methodological approach of Islamic science and its philosophy are not different, but their aim is one, that is to enable human beings through scientific activities to realize the Divine existence (Qadir 1988: 2). Furthermore, sense of the sacred is the mainstream in the Islamic concept of knowledge which establishes a valid understanding of the relation of God with other creation and origination of everything including knowledge from Him. Subsequently, if the origin of knowledge is Sacred then its aim and object would be the realization of Sacred (Qadir 1988: 5).

6. Epistemology of Islamic science

Epistemology of Islamic science is the foundation on which the whole structure of Islamic science is founded. For Nasr, in the beginning the reality was one, that was being and knowledge. The relation of knowledge with being has been profound and sacred from the beginning. But with the course of time knowledge has become separated from being and reality. Eventually, knowledge has been desacralized, particularly those disciplines which went through the process of modernization. As a result, the element of union which emerges in a form of sacredness faded away, and it has become very difficult to attain the reality and the perfume of sacredness for the people of modern age. But Nasr believes that sacredness is the root of knowledge and inseparable and this knowledge is the knowledge of that reality (Nasr 1989: 6).

Bakar articulates that Islam encourages man to acquire knowledge and act accordingly. This is because Islam is based on knowledge and considers it the vehicle to the salvation of human soul, and to gain the success of this world and the hereafter (Bakar 1991: 1). It is an established fact among contemporary historians and philosophers that a set of phenomena which is studied by a group of scientists is actually verified by that authority based on specific view of reality – worldviews. Cosmology in Islamic science demonstrates the greater views of qualitative reality than in modern science (Bakar 1991: 21).

⁴ This phenomenon is valid for all kinds of research whether for natural sciences or social sciences. Now, to say that the findings or discovery of research conducted in the West may not be in line with Islamic values is correct. If findings and research are actual, they are still presented coloured by their worldview and portrayed in the light of that worldview and their values.

Sardar shares similar understanding regarding the uniqueness of Islamic science due to its epistemological and methodological factors. Epistemology constructed the stance, and the goals of science and methods influenced the ways of practicing the science and its content (Sardar 1985: 19). Before Renaissance and so-called scientific revolution, knowledge, i.e. 'science', was not impregnated with such division as secular science or sacred science. After the effect of secular and Western ideologies the venture of science was separated from its original seat and confined it to the sense perception purely, while refusing the validity of revealed knowledge. This exclusivism led science to the rejection of metaphysical reality, eventually narrowing its scope to physical universe only (Sardar 1985: 19). He maintains that in Islam, knowledge is based on the totality of experience and reality through the study of nature in various ways. Among these diverse ways knowledge can be attained through revelation and reason, through observation and intuition, through tradition and theoretical speculation. Aforementioned mediums of knowledge are equally valid in Islam, but all sources are concomitant to the Qur'anic revelation which provides the framework of eternal values (Sardar 1985: 19). At the same time, all forms of knowledge are interconnected by the spirit of revelation. Under the guidance of the Qur'anic revelation, the study of nature results in the very present spirit of the revelation that guides researchers to study nature for two reasons, one is to understand the physical reality and second to reflect on spiritual realities. The final outcome of studying nature from two perspectives, as mentioned above, entails a strong bond between *'ilm and istiṣlah* (public interest) which ensures the persuasion of knowledge conducive to prevail; equality, social justice and value for the prosperity of people and society (Sardar 1985: 20).

On the nature of science, whether it is Islamic or secular, Sardar argues that from one perspective science is neutral. This is the attitude of a scientist how he approaches science; makes science Islamic or secular. From the perspective of Islamic science, the limitations and boundaries of human mind and reason are stipulated, and it is recognized that all knowledge belongs to God. The Islamic approach towards science anticipates Islamic worldview in the practice and utilization of science (Sardar 1991: 2). For the sake of understanding the difference between secular nature of science and the Sufi tendency, Sardar cites Syed Ali Ashraf who asserts that reason is mainly focused in modern science which independently cannot attain spiritual reality or truth. The discovery of ultimate spiritual truth through scientific discoveries and scientism makes up human mind in such a way that it cannot accept anything as true unless it is proved empirically and rationally. Finally, this tendency underestimates spiritual values in society (Sardar 1991: 42).

7. Islam and science

As a matter of fact, there was no famous scientist during eighth to seventeenth century who had written something on the association between Islam and science. Before the emergence of modern science in the Muslim world, science always

existed within the framework of Islam. It was based on unique interaction between them. That interaction was founded on the intellectual framework of Islam which was shaped by the Qur'anic worldview (Iqbal 2007: xviii). During the heyday of Islamic civilization, the Islamic scientific tradition was the most advanced venture. There was no issue of a link between Islam and science. The need for link between Islam and science was felt only after the arrival of modern science in the Muslim world when it went through the process of colonization (Iqbal 2007: xvii).

There is no estrangement between theory and practice in Islam because Islamic principles of knowledge and action are rooted in the Qur'an and the Ḥadīth. We argue that sciences which were developed in Islamic civilization were never called Islamic because whatever Muslims studied and developed, they were based on the Qur'ān and Ḥadīth. All branches of knowledge developed by Muslims were imbedded with such a spirit that they could enhance an environment which corroborated with the expansion of science. Islam always encourages pursuing all kinds of knowledge as far as it is in line with Divine Unity. Thus, whole cosmology and metaphysics in Islamic science is derived from the Qur'an and the Prophetic tradition and laid the foundation of various branches of Islamic science (Nasr 1976: 5). The phenomena which are mentioned in the Qur'ān correlate the *āyāt* of the Qur'ān with the phenomena of nature, in a sense that nature is God's creation. This reality is very important for identifying the concept of nature and to outline the map of Islamic science (Nasr 1994: 55).

Islam directs human beings to acquire knowledge of the nature of ultimate reality in order to administer his life in accordance with that Reality. Nasr states that Islam is a complete way of life that guides human to reform his nature so that he could perform according to his eternal reality – as he *is* – in the Divine Presence (Nasr 1976: 5). In other words, Islam reminds man of the ultimate cause of his existence so that he could act according to the purpose which God has assigned to him.

Nasr perceives that Muslims can respond the challenge modernism, e.g. evolutionism, rationalism, existentialism and agnosticism through intellectual exertion. He urges strongly not to ignore and compromise with modernism and modern thought. He finds no possibility of wedding between the Islamic science and modern Western philosophy of science (Nasr n.d. 10). Fundamental philosophical differences between modern Western philosophy of science and the philosophy of Islamic science are evident. In spite of this the Qur'ān and Ḥadīth encourage people to be scientific in their approach.

8. Relations between intellect and reason

In Islam, reason and intellect are used as tools of acquiring knowledge. In terms of dealing with these tools, Nasr distinguishes 'intellect' from 'reason' and describes it as special human faculty which can be utilized according to the degree of human efforts. He denounces the understanding of intellect as prevailed in the modern world where 'intellect' is identical with 'reason and intuition'. In modern understanding,

intellect is a biological sixth sense which can be used for predicting future events but usually rejected as an authentic source of gaining knowledge by pure rationalists who are completely devoted to the use of reason. Therefore, it has become difficult in modern age to understand the role of these faculties in Islamic thought upon which the significant part of knowledge is based on (Nasr 2006: 94).

Nasr argues that the fundamental difference between intellect and reason has been deleted in modern language which was recognized in medieval Christian philosophy. For reason and intellect, a common word '*al-'aql*' is used in Arabic language and other Islamic languages. Hence, according to Nasr, a clear distinction between the two is recognized and their interrelation and the dependence of reason upon intellect is taken in consideration all the time.⁵ If we look at the word *ql* which is the root word of *al-'aql* means, 'to bind' (Nasr 2006: 94), Nasr articulates the actual function of *al-'aql* and contends that: It is the faculty that binds man to the Truth, to God, to his Origin. By virtue of being endowed with *al-'aql*, man becomes man and shares in the attribute of knowledge, *al-'ilm*, which ultimately belongs to God alone (Nasr 2006: 94).

For Nasr, reason is the reflection of intellect upon human mind, for that the Arabic term *istidlāl* and for intuition, *ḥads* and *firāsah* are being used normally. In traditional sense these terms refer to acquired knowledge that is not simply rational but also not irrational or oppose to intellectual. Some other terms; *dhawq*, *ishrāq*, *mukāshafah*, *basīrah*, *nazar*, and *badīhah*, according to Nasr, are related to the direct participation in obtaining knowledge of the truth in comparison with indirect and conceptual knowledge based on pure rational methodology (Nasr 2006: 95). In Islamic world demonstration, '*burhān*' is to be related to the faculty of reason or intellect, gnosis '*irfān*' used to be referred to the faculty of heart or intellect which is the seat of inner intuition and illumination, and the Qur'ān or revelation is associated to the Prophetic function (Nasr 2006: 94).

In order to understand the relationships among reason, intellect and intuition in Islam, Nasr emphasizes the study of those Islamic intellectual perspectives that have actualized several intellectual, spiritual and formal possibilities inherent in the Islamic revelation. Examples of actualization can be witnessed in various disciplines of pure religious sciences, such as Qur'anic and the *Sharīah* studies, theology, different schools of philosophy and Sufism (Nasr 2006: 95). Reason is other than intellect, it is described in Arabic as *aqljuzi*. As Nasr articulates that the origin of knowledge is sacred, it has the light of intellect which shines upon human mind and illuminates the reason (Rameen 2010: 206).

9. Conclusion

The above discussion demonstrates that Nasr's argument of the origin and development of Islamic philosophy is based on Greek civilization, which is mainly criticised by other proponents of Islamic science. The position of Islamic philosophy

⁵ It means in Arabic *al-'aql* has inclusive and broader meaning which covers reason and intellect as well.

and the philosophy of Islamic science in terms of traditional mode was accepted in general. However, when it comes to the origin and the cause of development of Islamic philosophy, he faces poignant criticism where in the majority of the scholars refuse to accept his idea of Greek science as the origin of Islamic philosophy of science. The major cause of the development of Islamic philosophy and the philosophy of Islamic science rooted into the *Tawhidic* worldview, which was recognized by many scholars. The knowledge which is contained in the Qur'an and Hadith has become the basis of all scientific endeavours. This knowledge guided the Islamic society to develop scientific culture in order to contribute to the betterment of society and acquire the truth of this universe. While considering the sacred nature of existence, all the possible means were adopted by the proponent of Islamic science to prevent destruction of nature.

We also observed that Nasr's presentation of intellect is quite exceptional which again has a traditional interpretation. From our understanding, his view about intellect is not imaginative or superficial. It is related to Islamic tradition; wherein human heart is the seat of intellect that is unlike reason which lies in the human mind. It is unfounded to say that the Muslims were driven by the translations from Greek to Arabic and that after the translation Muslims started thinking and took interest in ancient sciences. The real inspiration and driving force for Muslim scientists were the Qur'an and Hadith. To say that Islamic philosophy is the exact copy or the continuation of Greek philosophy is far from reality (Qadir2015: 28). Consequently, there was no room for Greek philosophy to influence Islamic philosophy and Islamic science because they were filled with Islamic theology, linguistic and well-established discipline of jurisprudence.

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